9-1340-222-34

TECHNICAL MANUAL

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL

(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

FOR

2.75-INCH LOW SPIN, FOLDING FIN AIRCRAFT ROCKETS, 66-MM LIGHT ANTITANK WEAPON SYSTEMS, 3.5-INCH ROCKETS AND M3A2E1 ROCKET MOTOR (JATO)

This copy is a reprint which includes current pages from Changes 1 through 6

HEADQUARTERS, DEPARTMENT OF THE ARMY

AUGUST 1974

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WARNINGS

Do not use any electrical equipment around ammunition unless it has a National Electrical Code rating of Class I for flammable vapor, Class II for explosive dusts (including ammunition), or is dual rated if both vapor and dusts are present.

Ground all ammunition containing explosives.

Fuze cavity liner must be in place prior to cleaning fuze well or threads with small stainless steel brush.

Change
No.6

TM 9-1340-222-34
C6

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, *15 July 1987*

Intermediate Direct Support and Intermediate General Support
Maintenance Manual
(Including Repair Parts and Special Tools List)
for
2.75-INCH LOW SPIN, FOLDING FIN AIRCRAFT ROCKETS.
2.75-INCH SPIN STABILIZED, WRAP AROUND FIN AIRCRAFT ROCKETS
66 MM LIGHT ANTITANK WEAPON SYSTEMS.
3.5-INCH ROCKETS AND M3A2E1 ROCKET MOTOR (JATO)

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4-11 thru 4-14	4-11 thru 4-14
4-17 and 4-18	4-17 and 4-18
B-1 and B-2	B-1 and B-2

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By Order of the Secretary of the Army:

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The Adjutant General

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Direct Support and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for 2.75-INCH LOW SPIN, FOLDING FIN AIRCRAFT ROCKETS, 2.75-INCH SPIN STABILIZED, WRAP AROUND FIN AIRCRAFT ROCKETS, 66MM LIGHT ANTITANK WEAPON SYSTEMS, 3.5-INCH ROCKETS AND M3A2E1 ROCKET MOTOR (JATO)

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Direct Support and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for 2.75-INCH LOW SPIN, FOLDING FIN AIRCRAFT ROCKETS, 66MM LIGHT ANTITANK WEAPON SYSTEMS, 3.5-INCH ROCKETS AND M3A2E1 ROCKET MOTOR (JATO)

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4-18.1/(4-18.2 blank)	4-18.1/(4-18.2 blank)
A-1 and A-2	A-1 and A-2
B-1 through B-6	B-1 through B-6

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Direct Support and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for 2.75-INCH LOW SPIN FOLDING FIN AIRCRAFT ROCKETS, 66-MM LIGHT ANTITANK WEAPON SYSTEMS, 3.5-INCH ROCKETS AND M3A2E1 ROCKET MOTOR (JATO)

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TM 9-1340-222-34
C 2

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Direct Support and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for 2.75-INCH LOW SPIN FOLDING FIN AIRCRAFT ROCKETS, 66-MM LIGHT ANTITANK WEAPON SYSTEMS, 3.5-INCH ROCKETS AND M3A2E1 ROCKET MOTOR (JATO)

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TM 9-1340-222-34
C1

CHANGE

NO. 1

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Direct Support and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for 2.75-INCH LOW SPIN FOLDING FIN AIRCRAFT ROCKETS, 66MM LIGHT ANTITANK WEAPON SYSTEMS, 3.5-INCH ROCKETS AND M3A2E1 ROCKET MOTOR (JATO)

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Inside Cover	0	4-12	0
A	6	4-13 and 4-14	6
i	6	4-15 and 4-16	0
ii	6	4-17 and 4-18	6
1-1	0	4-18.1	4
1-2	4	4.18.2 blank	4
2-1	0	A-1 thru A-2	4
2-2 blank	0	B-1	2
3-1	0	B-2	6
3-2 and 3-3	5	B-3	5
3-4 thru 3-6	6	B-4	2
4-1 thru 4-10	0	B-5 and B-6	5
4-10.1	5	C-1 and C-2	5
4-10.2 blank	5	Authentication Page	0

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Technical Manual
No. 9-1340-222-34

TM 9-1340-222-34

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 21 August 1974

Intermediate Direct Support and Intermediate General Support Maintenance Manual (Including Repair Parts and Special Tools List) For 2.75-INCH LOW SPIN, FOLDING FIN AIRCRAFT ROCKETS, 2.75-INCH SPIN STABILIZED, WRAP AROUND FIN AIRCRAFT ROCKETS, 66MM LIGHT ANTITANK WEAPON SYSTEMS, 3.5-INCH ROCKETS AND M3A2E1 ROCKET MOTOR (JATO)

REPORTING OF ERRORS

You can improve this manual. If you find any mistakes or know of a way to improve the procedures, please let us know. Mail your DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to Commander, U.S. Army Armament, Munitions and Chemical Command, ATTN: AMSMC-MAY-T(D), Dover, NJ 07801-5001. A reply will be furnished to you.

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

a. This is one of a series of technical manuals on maintenance of 2.75-inch low spin, folding fin aircraft rockets (LSFFAR), 66mm light antitank weapon system (LAW), 3.5-inch rockets and rocket motor M3A2E1 (JATO). Information in this manual is limited to the responsibilities of direct and general support maintenance personnel.

b. Operating instructions and operator-level maintenance are covered in the weapon manuals listed in appendix A. Organizational level maintenance is covered in TM 9-1340-222-20 which also contains the maintenance allocation chart (MAC). Authorized procedures for each level of maintenance, including direct and general support, are specified in the MAC. Additional information is given in TM 9-1055-460-13&P, Operator's Aviation Unit and Intermediate Maintenance Manual Including Repair Parts and Special Tools List for 2.75-Inch Rocket Launchers, and TM 9-1090-207-13&P, Operator's Aviation Unit and Intermediate Maintenance Manual with Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts and Special Tools) for Rocket Management Subsystems Inventory-Deployment, XM138.

c. Instructions for conversion of expended 66-mm launchers M72A1 to launchers M190 are contained in TM 9-1340-203-20.

d. Destruction procedures are contained in TM 43-0002-33, Destruction of Improved Conventional Ammunition (ICM) to Prevent Enemy Use.

1-2. Forms, Records, and Reports

a. Maintenance forms, records, and reports which are to be used by maintenance personnel at all maintenance levels are listed in and prescribed by TM 38-750.

b. A record should be kept of each inspection job undertaken on an ammunition condition report (ACR).

c. Ammunition data cards will be annotated to reflect major maintenance operations in accordance with TM 9-1300-250.

1-3. Recommendation for Maintenance Publications Improvements

Deleted

Section II. DESCRIPTION AND DATA

1-4. General

Description and data on rockets, rocket motors, and rocket weapon systems are contained in TM 9-1340-222-20. Refer to the applicable operator and organizational maintenance manuals for detailed operating instructions.

Section III. SAFETY, CARE, AND HANDLING

1-5. General

General information on safety, care, and handling is contained in TM 9-1300-206. Specific information regarding safety, care, and handling is contained in the applicable operator's and organizational maintenance manuals.

1-6. Safety

Observe precautions generally applicable to ammunition and comply with all regulations and local standing operating procedures. Safety rules peculiar to rockets, rocket motors, and rocket weapon systems are discussed below.

a. Point rockets delivered to the firing line in the direction that would cause the least damage in case of accidental ignition. Store rockets with warhead pointed nose down, if practical.

b. Some LAW systems contain a small amount of radioactive material in the front sight. These systems are identified by the words LIMITED LIGHT SIGHT printed on the launcher and packing containers. If these launchers are returned with broken front sight, remove sight, seal in plastic bag and segregate for disposition by authorized personnel in accordance with AR 385-11.

c. Do not extend 66mm LAW launcher to open position during inspection.

d. Rocket motors and warheads may include electrical circuits which are susceptible to radio frequency energies and static electricity. Rockets in electrically operated launchers may be susceptible to initiation by electromagnetic radiation.

e. Conduct inspection on electrically initiated rocket motors in approved areas complying with HERO (hazard of electromagnetic radiation to ordnance) requirements specified in TM 9-1340-222-20.

f. Disassembly of explosive components without specific authorization is strictly prohibited.

1-7. Care and Handling

a. General.

(1) Explosive materials must be handled with appropriate care at all times.

(2) Do not drop, drag, throw, tumble, or otherwise strike boxes containing explosive components.

(3) Do not subject rockets or warheads to excessive moisture or prolonged exposure to direct rays of the sun.

(4) Keep components in original packing until immediately prior to assembly or preparation for use.

(5) Keep empty shipping containers from becoming broken or damaged.

(6) Observe storage procedures outlined in TM 9-1340-222-20.

b. 2.75-Inch Rockets Only.

(1) Reject crated rockets or rocket motors dropped 5 feet or more on hard surface.

(2) Reject uncrated rockets or rocket motors dropped 2 feet or more on hard surface.

(3) Reject fuze-warhead combinations, crated and uncrated, if dropped 5 feet or more on hard surface.

(4) Contact ammunition supply personnel for disposition of rejected rockets.

CHAPTER 2

TOOLS AND EQUIPMENT

2-1. General

Tools, equipment, and repair parts, in addition to those available to the using organization, are supplied to direct support and general support maintenance units as required for maintaining rockets, rocket motors, and rocket weapon systems.

2-2. Tools and Equipment.

a. Tools and equipment generally applicable to these rockets are authorized for issue by tables of allowances (TA) and tables of organization and equipment (TOE).

b. Unless otherwise indicated, local fabrication of tools and equipment is not authorized.

c. Special tools required for maintenance are listed in SC 4940-95-CL-A11 (direct support maintenance), SC 4925-95-CL-A03 (general support maintenance), and appendix B of this manual.

2-3. Repair Parts

Repair parts required for direct support and general support maintenance are listed in appendix B.

CHAPTER 3

INSPECTION REQUIREMENTS

Section I. GENERAL

3-1. Purpose of Inspection

a. Inspection criteria contained in this publication are provided to assure that all maintenance performed will restore the item(s) to an acceptable quality level.

b. A complete plan of all maintenance work is required. Prepare standing operating procedures (SOP) that contain detailed production techniques, standards, and controls necessary to produce a quality product. See TM 9-1300-250 for planning procedures and SOP preparation.

3-2. Ammunition Surveillance Program

Surveillance includes those actions necessary to evaluate the current degree of serviceability of ammunition. See AR 702-6, AR 740-1, AR 742-9, and SB 742-1 for policy, responsibilities and procedures applicable to the Ammunition Surveillance and Quality Evaluation Program.

3-3. Inspections

a. Serviceability.

(1) Ammunition items will be inspected by a quality assurance specialist (ammunition) or MOS 55x40 personnel under the guidance of a quality assurance specialist (ammunition) to determine serviceability or unserviceability according to SB 742-1 and other pertinent SB's.

(2) Required maintenance for unserviceable materiel will be indicated on the inspection report.

b. Premaintenance. At the unpack operation, prior to rework, ammunition items will be screened 100 percent. DS and/or GS personnel will perform premaintenance screening, which will include the following:

(1) All items with critical nonfunctional defects will be separated from the quantity to be maintained and disposed of as directed in the SOP.

(2) All items with defects, as listed in table 3-1, will be corrected during maintenance.

(3) Other evidence of poor workmanship or defects that could cause accelerated deterioration or adversely affect the function of the items will be corrected.

c. In-Process.

(1) In-process inspections are an integral part of the maintenance procedures to assure that previous work is adequate and acceptable prior to proceeding with further operations.

(2) Since these inspections are part of the maintenance procedures contained in chapter 4, they will not be specifically covered in this chapter.

d. Final Acceptance.

(1) Ammunition items will be inspected after maintenance has been completed. The final acceptance inspection will determine whether or not maintenance accomplished has returned unserviceable munitions to an acceptable condition.

(2) Quality assurance specialist (ammunition) or MOS 55x40 personnel under the guidance of a quality assurance specialist (ammunition) will perform this inspection prior to returning the material to its storage area.

3-4. Inspection Methods

a. Visual Inspection. Careful observation of item, noting listed defects and any other abnormalities.

b. Manual Inspection. Movement by hand of specified area of item to determine if listed defect(s) exists (e. g., incorrect loose part).

c. Gage Inspection. Checking an item with a measuring instrument or a standard mating piece to determine if its size is acceptable in certain critical areas. Defects are derived from either predetermined standards or on a "go" — "no go" basis (e. g., a ring gage).

3-5. Extent of Inspections

a. Sealed Packages. During serviceability inspections, items packed in barrier bags, jungle wrap, or sealed cans should not be opened for inspection unless sealed-package has been opened or there is specific reason to suspect damage. Therefore, sealed packages will usually be subjected only to visual inspection.

b. Processed Items. All processed items will be subjected to in-process inspections and a final acceptance inspection.

Section II. CLASSIFICATION OF MATERIAL DEFECTS

3-6. General

Ammunition and packaging defects, listed in table 3-1, provide the method of inspection for categories of defects required during maintenance. Categories of defects are defined in SB 742-1. An acceptable quality level (AQL) established for each defect is provided in table 3-1 for evaluation during final acceptance inspection.

3-7. In-Process and Final Inspection

a. All items (ammunition and packing materials) processed will be subject to in-process and final inspection to assure acceptability.

b. In-process and final inspections will be included as an integral part of all maintenance procedures.

3-8. Disposition of Lots

a. Each lot that meets the acceptable quality level (AQL) in table 3-1 is acceptable for issue and use. Critical defective(s) will be removed from otherwise acceptable lots and destroyed.

b. Lots found with defects will be inspected 100 percent and reworked within the capability of the unit, as specified in the maintenance allocation chart (MAC). If required maintenance is beyond the capability of the unit, request disposition instructions through ammunition maintenance channels.

c. Any maintenance operation which results in a change to the information on the lot ammunition data card requires the addition of an alphabetic suffix to the lot number. Lot suffixes for each lot or operation will be obtained through ammunition maintenance channels.

Table 3-1. Classification of Material Defects

GENERAL PACKAGING

Component	Category	Defect	Method of inspection	Reference	AQL
Outer container	Major	Damaged, weathered, or rotted to extent contents are not protected or container is no longer structurally sound	Visual	TM 9-1340-222-20	0.40
	Major	Container cap or closure insecure to extent contents are not protected	Visual/Manual	TM 9-1340-222-20	0.40
	Major	Contents loose to extent item may be damaged in handling	Visual/Manual	TM 9-1340-222-20	0.40
	Minor	Hardware or banding loose, missing, broken, or ineffective	Visual/Manual	TM 9-1340-222-20	0.65
	Minor	Handle or cleat missing or broken	Visual	TM 9-1340-222-20	0.65
Inner container	Major	Damaged to extent contents are not protected or cannot be readily removed	Visual/Manual	TM 9-1340-222-20	0.40
	Major	Barrier bag improperly sealed, torn, cut, or otherwise penetrated	Visual	para 4-7*c*	0.40
	Minor	Wet (except metal), rusted, moldy, or mildewed	Visual	TM 9-1340-222-20	0.65
	Minor	Barrier bag edges delaminating but not yet unsealed	Visual	para 4-7*c*	0.65

PALLETS, WOODEN BOXES AND CRATES

Hardware	Minor	Inoperative or loose	Visual/Manual	TM 9-1340-222-20	0.65
	Minor	Nails, screws, and fasteners which can be replaced or properly sealed	Visual	TM 9-1340-222-20	0.65
Ends	Major	Damage which requires disassembly of box	Visual	TM 9-1340-222-20	0.40
	Minor	Broken or missing cleats and handles	Visual	TM 9-1340-222-20	0.65
Wood	Major	Splits closer than 1 inch to edge of board or adjoining split or over 1/8-inch wide	Visual	TM 9-1340-222-20	0.40

Table 3-1. Classification of Material Defects—Continued

PALLETS, WOODEN BOXES AND CRATES - Continued

Component	Catagory	Defect	Method of inspection	Reference	AQL
Wood (continued)	Major	Warping which prevents insertion or removal of rounds and/or sealing of box	Visual/Manual	TM 9-1340-222-20	0.40
	Major	Excessive mildew and mold which cannot be removed and which render markings illegible	Visual	TM 9-1340-222-20	0.40
	Major	Holes or loose knots which exceed 1½ inches in largest diameter or ⅓ width of board	Visual	TM 9-1340-222-20	0.40
	Major	Knots greater than ¼ the width of the skid	Visual	TM 9-1340-222-20	0.40
	Minor	Splits over 3 inches but no closer than 1 inch to edge of board or adjoining split; or 1/8-inch wide, which can be repaired by use of corrugated fasteners	Visual	TM 9-1340-222-20	0.65
	Minor	Loose skids	Visual	TM 9-1340-222-20	0.65
Strapping	Minor	Missing, rusted, or distorted	Visual	TM 9-1340-222-20	0.65
Wires	Major	Broken or rusted through	Visual	Pasra 4-7*b*	0.40
Marking	Major	Incorrect and/or illegible	Visual	para 4-11	0.40
		FIBER CONTAINERS			
Metal ends	Major	Perforations, excessive rust, or ends which are crushed or not securely crimped to body	Visual	TM 9-1340-222-20	0.40
Body and cap	Major	Cuts, tears, or gouges closer than 1 inch to closure, more than ½ square inch in area, or through all impregnated layers	Visual	TM 9-1340-222-20	0.40
	Major	Molded, mildewed, or rotted	Visual	TM 9-1340-222-20	0.40
	Major	Wrinkled or peeling	Visual	TM 9-1340-222-20	0.40
	Major	Blisters with combined area of more than ½ square inch	Visual	TM 9-1340-222-20	0.40
	Major	Wet or soft containers	Visual/Manual	TM 9-1340-222-20	0.40
	Minor	Cuts, tears, or gouges not closer than 1 inch to closure, less than ½ square inch in area, and unpenetrated layers which can be spot painted	Visual	para 4-9*c*	0.65
Marking	Major	Incorrect and/or illegible	Visual	para 4-11	0.40
		METAL CONTAINERS			
Body	Major	Dents which impair the structural integrity of the material	Visual	TM 9-1340-222-20	0.40
	Major	Loose or leaking seams	Visual	TM 9-1340-222-20	0.40
	Major	Rust which has caused pitting and perforations	Visual	TM 9-1340-222-20	0.40
	Major	Perforated	Visual	TM 9-1340-222-20	0.40
	Major	Damaged supports which are integral to container	Visual	TM 9-1340-222-20	0.40
	Minor	Dents deeper than ¼ inch which may be removed without weakening structure of container	Visual	TM 9-1340-222-20	0.65
	Minor	Minor rust which can be removed	Visual	para 4-6	0.65
	Minor	Supports which can be replaced	Visual	TM 9-1340-222-20	0.65
Caps and covers	Major	Rust which has caused excessive pitting	Visual	TM 9-1340-222-20	0.40

Table 3-1. Classification of Material Defects—Continued

METAL CONTAINERS—Continued

Component	Catagory	Defect	Method of inspection	Reference	AQL
Caps and covers (continued)	Major	Perforated	Visual	TM 9-1340-222-20	0.40
	Minor	Minor rust which can be removed	Visual	para 4-6	0.65
Marking	Major	Incorrect and/or illegible	Visual	para 4-11	0.40
		METAL BOXES			
Body and cover	Major	Extensive pitting and rust	Visual	TM 9-1340-222-20	0.40
	Major	Split seams	Visual	TM 9-1340-222-20	0.40
	Major	Dents, which cause creases or folds in metal which cannot be removed	Visual	TM 9-1340-222-20	0.40
	Major	Perforated	Visual	TM 9-1340-222-20	0.40
	Major	Missing or broken separators	Visual	TM 9-1340-222-20	0.40
	Minor	Minor rust which can be removed	Visual	para 4-6	0.65
	Minor	Dents exceeding 4 square inches per side, end or top, or deeper than ¼ inch	Visual	TM 9-1340-222-20	0.65
	Minor	Damaged or missing gaskets	Visual	TM 9-1340-222-20	0.65
Marking	Major	Incorrect and/or illegible	Visual	para 4-11	0.40
		66-MM LAW[1]			
Launcher	Critical	Outer tube cracked	Visual	—	1.00
	Critical	Inner tube dented	Visual	—	1.00
	Critical	Igniter tube broken or kinked	Visual	—	1.00
	Critical	Evidence of filler exudation, heavy corrosion or epoxy deposits in inner tube	Visual	—	1.00
	Critical	Words "w/coupler" missing from nomenclature and suffix letter "R" missing from lot number (except M72A3)	Visual	para 4-11	1.00
	Major	Launcher cannot be fully extended or locked	Manual	—	0.40
	Major	Buffer plate on M72A3 missing	Visual	—	0.40
	Major	Pull pin missing	Visual	—	0.40
	Major	System cannot be armed	Manual	—	0.40
	Major	Front or rear sights broken	Visual	—	0.40
	Major	Marking obliterated to extent that item or lot number cannot be positively identified	Visual	para 4-11	0.40
		2.75-INCH LSFFAR[2]			
Warheads (fuzed and unfuzed)	Critical	Filler exudation	Visual	—	1.00
	Critical	Cracks in warhead	Visual	—	1.00
	Major	Rust on metal surfaces or threads extensive enough to prevent assembly and/or affect metal integrity	Visual/Manual	—	0.40
	Major	Dents, deep scratches, or gouges	Visual	—	0.40
	Major	Painting and marking obliterated to extent that item cannot be positively identified	Visual	paras 4-9 and 4-11	0.40
Fuzes	Critical	Cracks in fuze body	Visual	—	1.00
	Major	Rust on metal surfaces or threads extensive enough to prevent assembly and/or affect metal integrity	Visual/Manual	—	0.40
	Major	Dents, deep scratches, or gouges	Visual	—	0.40

[1]Inspection procedures which require launcher to be extended will be performed only on weapon systems which have been turned in unpacked (removed from barrier bag) on an individual (one-at-a-time) basis.

[2]Do not turn or rotate nozzle assembly.

Table 3-1. Classification of Material Defects - Continued

2.75-INCH LSFFAR-Continued

Component	Category	Defect	Method of inspection	Reference	AQL
Fuzes (continued)	Major	Marking obliterated to extent that item cannot be positively identified	Visual	para 4-11	0.40
	Major	Umbilical assembly missing (remote set fuzes only)	Visual		0.40
Motors	Critical	Shorting clip or fin protector missing (MK4 or MK40 motors)	Visual		
	Critical	Shielding fin restraint band missing (MK 66 Mods 1 and 2)	Visual		
	Critical	Cracks in motor casing	Visual	--	1.00
	Critical	Dents (1/8-inch or more in depth) to extent that propellent grain may have been broken	Visual	--	1.00
	Critical	Loose nozzles on nozzle and fin assembly	Manual	--	1.00
	Critical	Broken lead wire	Visual	--	0.40
	Major	Missing fin or hinge pin	Visual	--	0.40
	Major	Corrosion on metal surfaces or threads extensive enough to prevent assembly and/or affect metal integrity	Visual/Manual	--	0.40
	Major	Lockwire distorted or improperly assembled - protrudes above surface of rocket motor tube.	Visual	--	0.40
	Major	Painting and marking obliterated to extent item cannot be identified	Visual	paras 4-9 and 4-11	0.40
Assembled complete round	Critical	Filler exudation	Visual	--	1.00
	Critical	Cracks in warhead	Visual	--	1.00
	Major	Loosely assembled components (e.g., fuze to warhead or warhead to motor)	Manual	TM 9-1340-222-20	0.40
		3-5-INCH ROCKETS			
Assembled complete round	Critical	Filler exudation	Visual	--	1.00
	Critical	Cracks in warhead, fuze, or motor	Visual	--	1.00
	Critical	Shorting clip missing	Visual	--	1.00
	Critical	Heavily corroded fin shroud	Visual	--	1.00
	Critical	Fuze ejection pin missing	Visual	--	1.00
	Critical	Deep dents on motor body	Visual	--	1.00
	Critical	Gap between warhead and fuze	Visual	--	1.00
	Critical	Heavily corroded shorting clip or heavy corrosion of electrical contacts around shorting clip	Visual	--	1.00
	Major	Fuze ejection pin not free to move	Manual	--	0.40
	Major	Broken ignition wires	Visual	--	0.40
	Major	Extensive corrosion on warhead or rocket motor	Visual	--	0.40
	Major	Loose rivets or electrical connectors	Manual	--	0.40
	Major	Nozzle closure and wires not properly sealed with rubber adhesive	Visual	--	0.40

Table 3-1. Classification of Material Defects - Continued

3.5-INCH ROCKETS-Continued					
Component	Category	Defect	Method of inspection	Reference	AQL
Assembled complete round	Major	Damaged nozzle, shroud, or fins	Visual	--	0.40
	Major	Painting and marking obliterated to extent item cannot be positively identified	Visual	--	0.40
		ROCKET MOTOR M3A2E1 (JATO)			
Assembled complete item	Critical	Cracks in body or nozzle	Visual	--	1.00
	Critical	Nozzle loose on body	Manual	--	1.00
	Critical	Nozzle distorted	Visual	--	1.00
	Major	Igniter plug assembly loose or damaged	Manual/Visual	--	0.40
	Major	Painting and marking obliterated to extent item cannot be positively identified	Visual	--	0.40

CHAPTER 4

MAINTENANCE PROCEDURES

Section I. INTRODUCTION

4-1. General

a. Direct support (DS) and general support (GS) maintenance operations are restricted to the procedures in this manual, TM 9-1340-203-20, and in TM 9-1340-222-20, as indicated in the maintenance allocation chart.

b. Repair parts, packing materials, and expendable supplies (appendixes B and C) required by DS and GS units will be locally stocked. DS and GS units are also responsible for receiving and storing packaging materials salvaged from expended ammunition and for providing technical assistance to operator and organizational units.

c. Before beginning maintenance operations, a line layout and standing operating procedures (SOP) are required. Guidelines for organizing the line and writing the SOP are contained in TM 9-1300-250.

d. In general, maintenance operations include but are not limited to the following:

(1) Cleaning and preservation of individual items and packaging materials.

(2) Removal of light rust and corrosion.

(3) Repair and replacement of packaging materials.

(4) Painting and markings.

e. Expendable supplies are listed in appendix C.

4-2. Direct Support Maintenance

a. Direct support maintenance is performed under the following conditions:

(1) Upon receipt of unserviceable ammunition.

(2) When maintenance is authorized to correct deficiencies in suspended ammunition lots.

(3) When operator and/or organizational units request on-site assistance.

(4) When inspection of on-hand stocks reveals the need.

b. Refer to FM 9-19 for mission and organization.

4-3. General Support Maintenance

General support maintenance is accomplished under the same conditions as direct support maintenance but on greater quantities of ammunition. Refer to FM 9-19 for mission and organization.

4-4. Unpacking and Repacking

Step-by-step unpacking and repacking procedures are given in TM 9-1340-222-20.

4-5. Inspection

Premaintenance, in-process, and final inspection requirements are defined in Chapter 3.

Section II. CLEANING

4-6. General

WARNING

Do not use any electrical equipment around ammunition unless it has a National Electrical Code rating of Class I for flammable vapor, Class II for explosive dusts (including ammunition), or is dual rated if both vapor and dusts are present.

Ground all ammunition containing explosives.

a. Tools and Equipment.

(1) Disposable flammable waste can.

(2) Nonferrous brush.

(3) Plunger type safety can.

b. Expendable Supplies.

(1) Alcohol.

(2) Acetone.

(3) Corrosion removing compound.

(4) Rags.

(5) Sandpaper (abrasive).

c. Procedure.

WARNING

Fuze cavity liner must be in place prior to cleaning fuze well or threads with small stainless steel brush.

CAUTION

Store rags in noncombustible self-closing containers. Place wastes or used rags in water filled containers. Areas will be well ventilated where solvents and paints are used.

(1) Remove dirt, mud and other foreign material using rags or brushes. Use rags dampened with alcohol or acetone to remove grease.

(2) Using nonferrous brush, remove flaked, chipped, blistered, or peeling paint.

(3) Remove rust using nonferrous brush or sandpaper.

(4) If rocket does not have a fuze cavity liner, clean fuze well and threads with clean dry rags.

NOTE

Do not use rags dampened with alcohol or acetone.

(5) If rocket does have a fuze cavity liner, clean fuze well and threads with a small stainless steel brush and rags dampened with alcohol or acetone.

(6) Clean corrosion from aluminum or copper-based metals by first brushing with a nonferrous brush and then removing residue with rags and corrosion removing compound.

(7) Clean only to degree necessary to remove rust or corrosion.

(8) Inspect cleaned item for cracks or other damage or deterioration.

(9) Allow solvent-cleaned surfaces to dry thoroughly before painting.

Section III. REPAIR

4-7. Packaging Materials

a. General. Detailed procedures for authorized repair of most packaging materials are given in TM 9-1340-222-20. Procedures authorized at DS or GS levels are presented below.

b. Wirebound Box Loops.

(1) *Tools and equipment.*

(a) Hammer.

(b) Tin snips.

(c) Wire cutter.

(2) *Expendable supplies.*

(a) Repair loop, 13 gauge wire.

(b) Wire.

(3) *Procedure.* This procedure is preferred if appropriate wire cutter and repair loops are available. If these cannot be obtained, proceed to alternate repair procedure (4) below.

NOTE

Refer to figure 4-1 for the following procedure:

(a) Remove broken loop by cutting wire (step 1).

(b) Cut first staple and release wire (step 2).

(c) Slide one end of repair loop onto binding wire (step 3).

(d) Place notch of wire cutter one-fourth inch to three-eighths inch from end of wire — and bend wire into a half circle (step 4).

(e) Insert bent end of wire into repair loop coil and slide loop up (step 5).

(f) Lock repair loop in place by giving the end of the wire a further bend with notch of wire cutter (step 6).

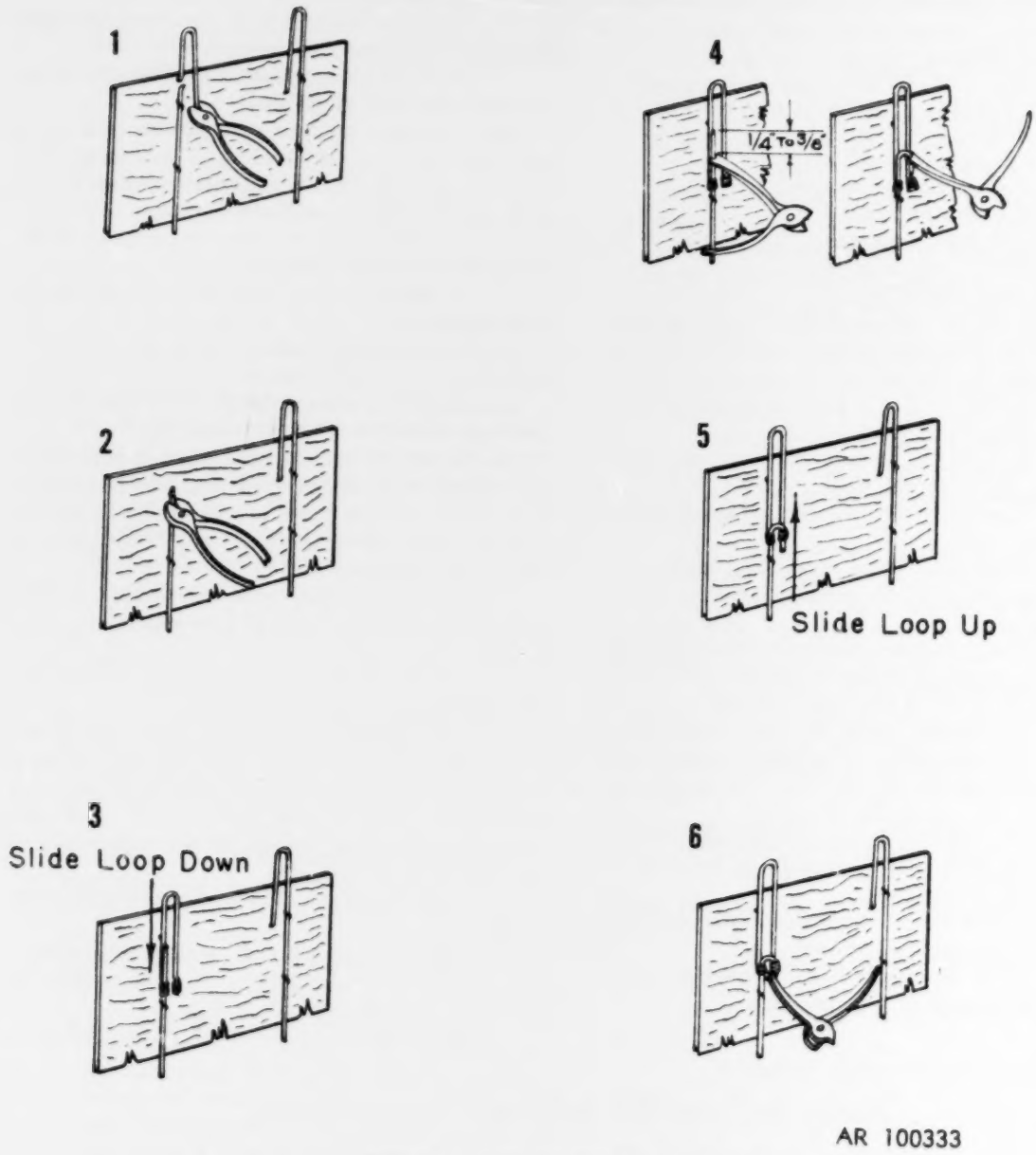


Figure 4-1. Repairing loops on wirebound box.

(4) *Alternate procedure.* Repair broken wire loop on a wirebound box if both legs of broken loop are securely fastened to box as follows:

(a) Cut off broken loop even with top edge of box.

(b) Using pliers, bend remaining wire legs back one-half inch, forming half circles.

(c) Cut a 6-inch length of wire to replace broken loop.

(d) Bend repair wire in half to form a "U" shape. Then bend about one-half inch of each leg outward about 150°.

(e) Hook bent legs of repair wire into half circles of box wires.

(f) Twist ends of repair wire around ends of box wires.

(g) Place box on hard surface or place a steel bar under repair area.

(h) Secure repair by hammering each half circle on box wire where it is connected to repair wire.

c. Barrier Bags.

NOTE

The following procedure is only authorized at GS level:

(1) *Tools and equipment.*

(a) Heat sealing machine.

(b) Scissors or knife.

(2) *Expendable supplies.*

(a) Barrier material.

(b) Tape PPP-T-60.

(3) *Procedure.* This procedure is basically a repacking procedure but is listed here because it will normally be undertaken on a repair basis. Only reseal items that have been completely inspected and found serviceable.

(a) Receive bag from unpacking operation. Trim open end straight if necessary.

(b) Inspect barrier bag and accept or reject as required.

(c) Acceptable bags are intact, except for opening slit, and can be resealed after contents are reinserted.

(d) If bag corners are delaminated but bag is otherwise intact and can be sealed, use heat sealing machine to relaminate corners.

(e) Set rejects aside for later disposal.

(f) If markings are obliterated on otherwise undamaged bags, remark as instructed in paragraph 4-11.

(g) If a new barrier bag is required, proceed according to replacement procedures outlined in either (*h*) or (*i*) below.

(h) If two sheets of barrier material are to be utilized, proceed as follows:

1. Cut two sheets equal to outside width and outside length of original bag.

2. Place two cut sheets together, plastic-coated surfaces together, and aline edges.

3. Seal bottom and two longest edges using heat-sealing machine.

(i) If one sheet of barrier material is to be utilized, proceed as follows:

1. Cut one sheet equal to outside width and two times the outside length of original bag.

2. Fold length dimension of sheet in half with plastic-coated surfaces together.

3. Seal bottom and two longest edges using heat sealing machine.

(j) Leave shortest edge of bag unsealed for bag opening.

(k) Heat seals shall be a minimum of ½ inch wide.

(l) Assure that item to be repacked and packing materials are clean and dry.

(m) Place item(s) into original inner pack in original manner using all padding materials. Use extra padding materials to fill voids and to prevent item from moving. Tape inner pack to secure it if necessary.

(n) Place inner pads in barrier bag in original orientation using creases, etc., as a guide.

(o) Heat-seal bag opening except for approximately 1 inch from end.

(p) Flatten bag around inner pack and press sides of open end of bag together to force out excess air. Compress open corners of bag with fingers to prevent entrance of air and seal remaining unsealed portion of bag opening. Seal full width of sealing bar.

(q) Heat seal shall be a minimum of ½ inch wide.

(r) Check to see that seal is complete.

(s) Fold sealed end in original manner as indicated by impressions in bag.

(t) Mark as instructed in paragraph 4-11.

Section IV. TOUCHUP, PAINTING, AND MARKING

4-8. Touchup

a. Tools and Equipment.

(1) Disposable flammable waste can.

(2) Paint brush.

(3) Plunger type safety can.

(4) Respirator.

(5) Small brush.

(6) Paint sprayer.

b. Expendable Supplies.

(1) Alcohol, denatured.

(2) Clean rags.

(3) Disposable plastic gloves.

(4) Enamel of appropriate color.

(5) Ink, marking stencil.

(6) Masking tape.

(7) Primer, zinc chromate.

(8) Sandpaper (abrasive).

c. Procedure.

(1) Carefully record all marking data in event it is removed or obliterated during processing.

(2) Clean item according to section II.

(3) Lightly buff cleaned bare metal surface and surrounding paint with fine sandpaper.

(4) Remove loosened particles by wiping surface of item with clean rag dampened with alcohol.

(5) Cover legible markings and threaded surfaces with masking tape.

CAUTION

Wear respirator during spray paint operations.

(6) Using spray gun, spray can, or brush, cover bare metal with thin coat of zinc chromate primer.

(7) Air-dry 30 to 60 minutes or until surface is no longer tacky.

(8) If spray gun or spray can is used, cover primed area evenly with two very thin coats of appropriate color enamel, allowing first coat to dry thoroughly before applying second coat.

(9) If brush is used, cover primed area evenly with one thin coat of appropriate color enamel.

(10) Air-dry 30 to 60 minutes or until surface is no longer tacky.

(11) Remove masking tape.

(12) Touch up markings using small paint brush or re-stencil as required (para 4-11).

4-9. Painting

a. General.

NOTE

Repaint rockets, rocket components, and metal containers which have been cleaned extensively or to degree that large areas of metal surface are bare.

NOTE

Temperature of both paint and item to be painted must be between +50 °F and +100 °F for paint to adhere and dry properly. Ambient (surrounding air) temperature must be above +50 °F.

(1) *Tools and equipment.*

(a) Disposable flammable waste can.
(b) Improvised setups (prefabricated).
(c) Launcher, 2.75-inch rocket.
(d) Paint brush.
(e) Paint sprayer.
(f) Plunger type safety can.
(g) Respirator.

(2) *Expendable supplies.*

(a) Alcohol, denatured.
(b) Clean rags.
(c) Disposable plastic gloves.
(d) Enamel of appropriate color.
(e) Masking tape.
(f) Primer, zinc chromate.
(g) Sandpaper (abrasive).

(3) *Procedure.*

(a) Carefully record all marking data in event it is removed or obliterated during processing.

(b) Clean item according to section II.

(c) Remove as much paint as possible with cleaning materials furnished

(d) Lightly buff cleaned bare metal surface and any remaining paint with fine sandpaper.

(e) Remove loosened particles by wiping surface of item with clean rag dampened with alcohol.

(f) Cover any parts (threads, etc.) not to be painted with masking tape.

(g) Use improvised setups to suspend or cradle item to be painted.

CAUTION

Wear respirator during spray paint operations.

(h) Using spray gun, spot prime any bare metal with thin coat of zinc chromate primer. Do not prime over painted surface. Assure that all bare metal is primed.

(i) Air-dry 30 to 60 minutes or until surface is no longer tacky.

(j) Using spray gun, cover item surface evenly with one thin coat of appropriate color enamel.

(k) Air-dry 40 to 60 minutes or until surface is no longer tacky.

(l) Inspect to assure that paint covers projectile completely, including old unwanted markings.

(m) Touch up as required.

(n) Remove masking tape.

(o) Check diameter of 2.75-inch warheads after painting by gaging with launcher tube as follows:

1. Select serviceable launcher tube with the minimum inside diameter.

2. Carefully insert warhead into launcher.

3. Insert whole round up to shorting clip.

4. If warhead cannot be inserted or if it binds badly while being inserted, reject and set it aside for stripping and repainting.

(p) Restore marking according to paragraph 4-11.

b. Wood Packing Box.

NOTE

The normal reason for painting wooden boxes will be obliteration of old marking.

(1) *Tools and equipment.*

(a) Disposable flammable waste can.
(b) Paint brush.
(c) Paint sprayer.
(d) Plunger type safety can.

(e) Respirator.

(2) *Expendable supplies.*

(a) Enamel.

(b) Obliterating lacquer.

(c) Masking tape.

(d) Primer, zinc chromate.

(3) *Procedure.*

(a) Assure that box is clean and dry.

(b) If legible, cover valid markings with masking tape.

CAUTION

Wear respirator during spray paint operations.

(c) Using paint brush or spray gun, cover unwanted markings with marking obliterating lacquer or olive drab enamel.

(d) Air-dry 30 to 60 minutes or until surface is no longer tacky.

(e) Inspect to assure complete coverage. Repaint as required.

(f) Remove masking tape.

(g) Mark as required according to instructions in paragraph 4-11.

c. Fiber Tube Container.

(1) *Tools and equipment.*

(a) Disposable flammable waste can.

(b) Paint brush.

(c) Paint sprayer.

(d) Plunger type safety can.

(e) Respirator.

(2) *Expendable supplies.*

(a) Coating compound.

(b) Enamel, black.

(c) Kraft paper.

(d) Masking tape.

(e) Primer, zinc chromate.

(f) Rags.

(3) *Procedure.*

(a) Clean container and cap according to section II.

(b) Inspect and reject components with penetrations or rust which cannot be removed.

(c) Using kraft paper and masking tape, cover metal ends and unpainted inner tube.

CAUTION

Wear respirator during spray paint operations.

(d) Using brush or spray gun, cover outer surface of fiber tube and cap with coating compound.

(e) Air-dry 30 to 60 minutes or until surface is no longer tacky.

(f) Inspect to assure complete coverage. Repaint as required.

(g) Remove masking tape and kraft paper from cap and inner tube.

(h) Using masking tape and kraft paper, cover fiber surfaces.

CAUTION

Wear respirator during spray paint operations.

(i) Using spray gun, cover metal with zinc chromate primer.

(j) Air-dry 30 to 60 minutes or until surface is no longer tacky.

(k) Using paint brush or spray gun, cover metal ends with black enamel.

(l) Air-dry 30 to 60 minutes or until surface is no longer tacky.

(m) Inspect to assure complete coverage. Repaint as required.

(n) Remove masking tape and kraft paper.

(o) Mark as instructed according to paragraph 4-11.

4-10. Color Coding of Boxes With Light Loads

a. General. Organizations will use this procedure when boxes with less than full contents are to be returned to storage area or transported to new location.

b. Tools and Equipment.

(1) Disposable flammable waste can

(2) Paint brush.

(3) Plunger type safety can.

(4) Respirator.

(5) Small brush.

(6) Paint sprayer.

c. Expendable Supplies.

(1) Disposable plastic gloves.

(2) Masking tape.

(3) Orange enamel or lacquer.

d. Procedure. Paint boxes with less than full contents orange as follows:

(1) Check contents with markings on box to verify that nomenclature and lot number are correct.

(2) Make diagram of markings on box and carefully record all marking data except quantity figure.

(3) Cover original markings, except quantity number, with masking tape.

CAUTION

Wear respirator during spray paint operations.

(4) Using paint brush or spray gun, cover entire outer surface of box with orange enamel or lacquer.

(5) Air-dry box 30 to 60 minutes or until surface is no longer tacky.

(6) Remove masking tape.

(7) If required, re-mark box according to paragraph 4-11.

(8) Count quantity of items in box and mark

number on box in the same position as original quantity figure.

(9) Stencil words "LIGHT BOX" on each side of box, using approximately same size letters as original quantity figure.

4-11. Marking

a. General.

(1) Assure that all incorrect markings are obliterated.

(2) Lettering sizes for marking of items and their packaging will be limited to the following five basic sizes: 1/8 inch, 1/4 inch, 1/2 inch, 3/4 inch and 1 inch. Marking shall be in capital letters of equal height as large as possible within the specified sizes and consistent with the available space.

(3) Marking sizes on current ammunition stocks will not be changed unless rework/renovation is performed requiring remarking.

(4) Clean all marking equipment as often as necessary and at the end of each shift or termination of job, whichever comes first.

b. Tools and Equipment.

(1) Disposable flammable waste can.
(2) Fountain stencil brush.
(3) Masking tape.
(4) Plunger type safety can.
(5) Rubber type set.
(6) Worktable.

c. Expendable Supplies.

(1) Clean rags.
(2) Disposable plastic gloves.
(3) Masking tape.
(4) Solvent.
(5) Stencilboard.
(6) Stencil ink.

d. Procedure for Packaging Materials.

(1) Markings will be a color which contrasts with color of packaging material unless otherwise specified.

(2) See ammunition data card for specific markings or copy from old package.

(3) Refer to figures 4-2 through 4-4 for location and size of markings for metal container, fiber container, and wooden boxes.

(4) Inner packs must be marked with information usually found on item. If items have no inner packs, information must be stenciled on cardboard and included in repacked box.

(5) Apply markings by either rubber-type or stencil method outlined in *f*, below.

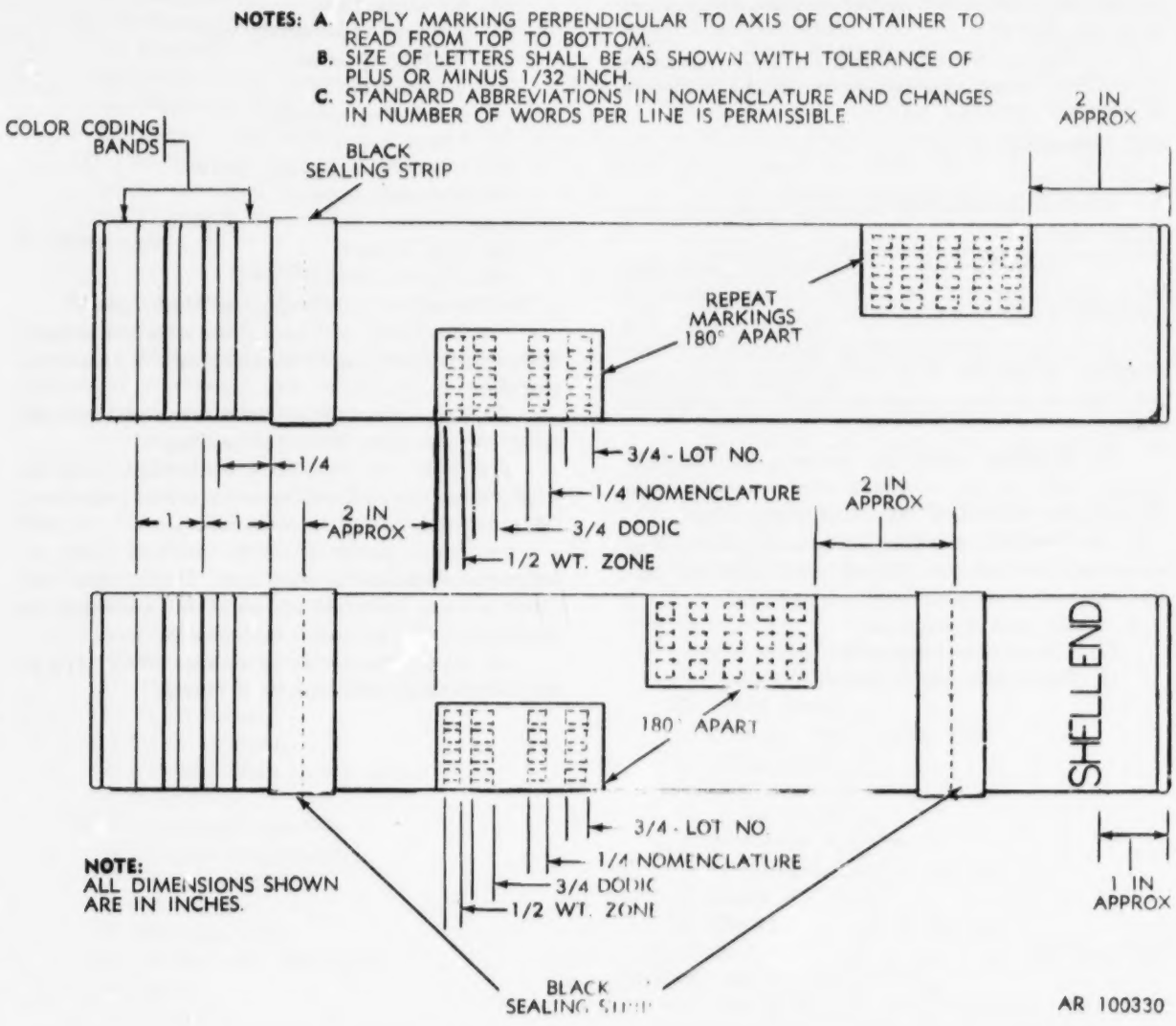
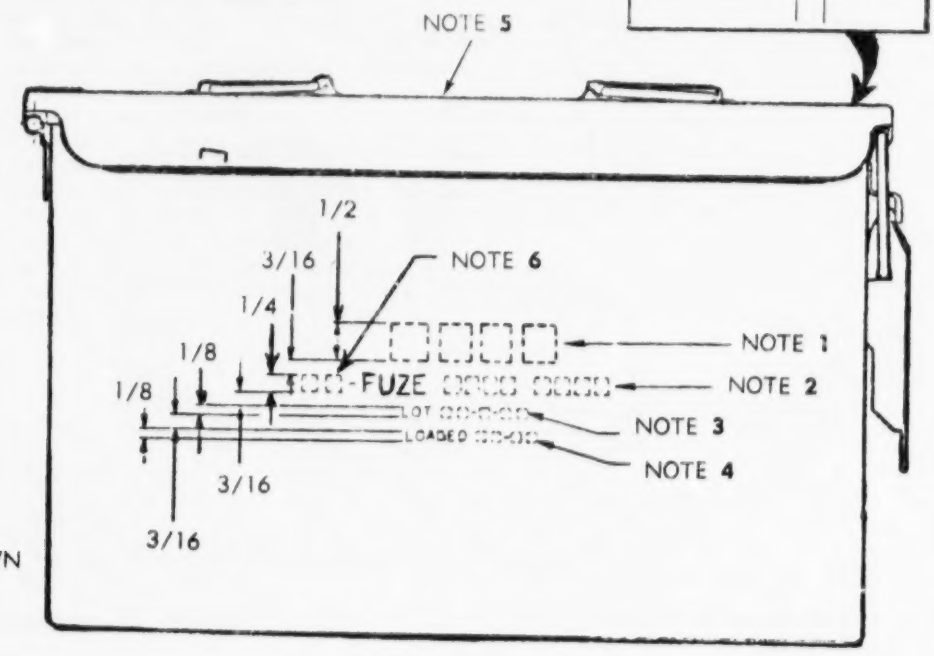

NOTES: A. APPLY MARKING PERPENDICULAR TO AXIS OF CONTAINER TO READ FROM TOP TO BOTTOM.
B. SIZE OF LETTERS SHALL BE AS SHOWN WITH TOLERANCE OF PLUS OR MINUS 1/32 INCH.
C. STANDARD ABBREVIATIONS IN NOMENCLATURE AND CHANGES IN NUMBER OF WORDS PER LINE IS PERMISSIBLE.
COLOR CODING BANDS
BLACK SEALING STRIP
2 IN APPROX
REPEAT MARKINGS 180° APART
1/4
1
1
2 IN APPROX
3/4 - LOT NO.
1/4 NOMENCLATURE
3/4 DODIC
1/2 WT. ZONE
2 IN APPROX
180° APART
SHELL END
3/4 - LOT NO.
1/4 NOMENCLATURE
3/4 DODIC
1/2 WT. ZONE
1 IN APPROX
NOTE:
ALL DIMENSIONS SHOWN ARE IN INCHES.
BLACK SEALING STRIP
AR 100330

Figure 4-2. Typical marking diagram for fiber containers.

NOTES:

1 - INSERT DEPARTMENT OF DEFENSE IDENTIFICATION CODE.
2 - INSERT DESCRIPTIVE NOMENCLATURE.
3 - INSERT LOT NUMBER.
4 - INSERT DATE (MONTH AND YEAR) LOADED.
5 - MARK "PACKAGED WITH DESICCANT-DO NOT OPEN UNTIL READY FOR USE OR INSPECTION" ON TOP OF BOX IN ANY CONVENIENT UNOBSTRUCTED LOCATION. SIZE OF LETTERS TO BE APPROX 1/4 INCH HIGH.
6 - INSERT "8," "10" OR "12."
7 - VT DECAL, WHEN APPLICABLE.



NOTE:
ALL DIMENSIONS SHOWN ARE IN INCHES

AR 100331

Figure 4-3. Typical marking diagram for metal containers.

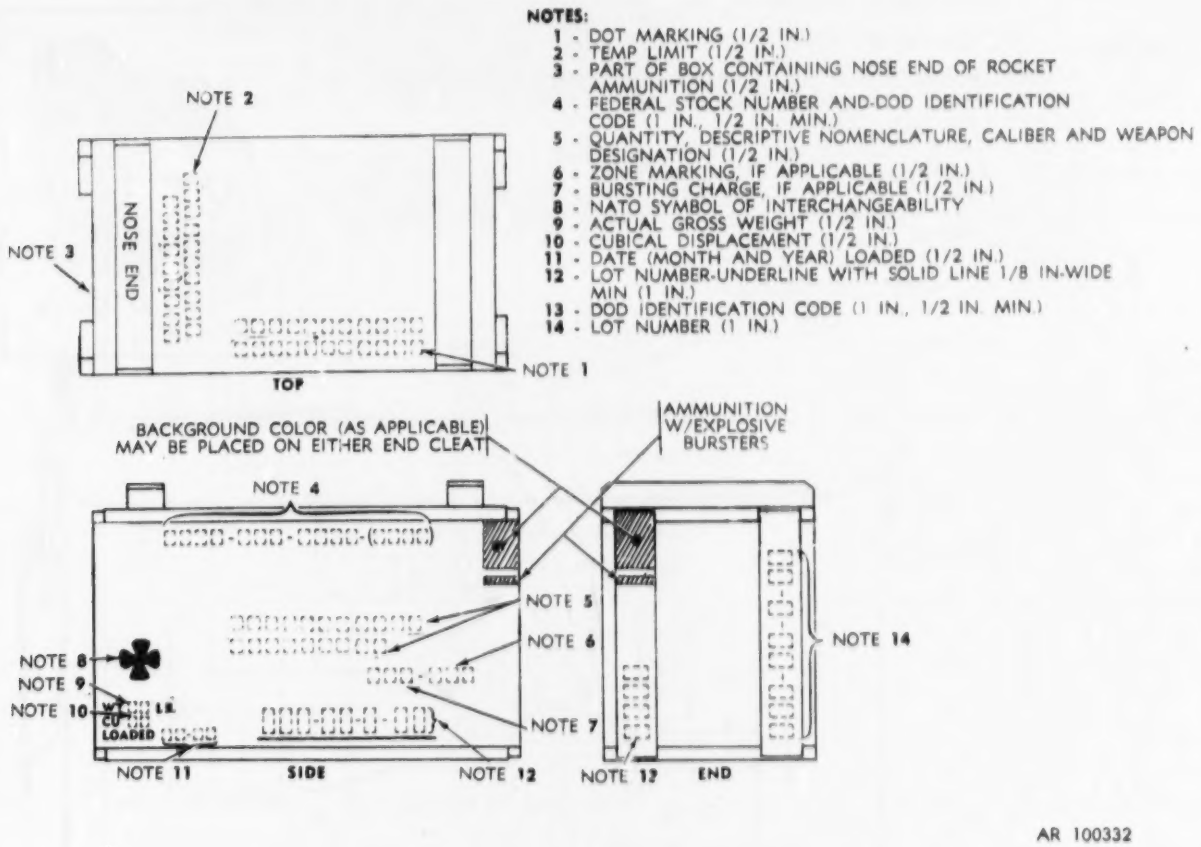

NOTES:
1 - DOT MARKING (1/2 IN.)
2 - TEMP LIMIT (1/2 IN.)
3 - PART OF BOX CONTAINING NOSE END OF ROCKET AMMUNITION (1/2 IN.)
4 - FEDERAL STOCK NUMBER AND DOD IDENTIFICATION CODE (1 IN., 1/2 IN. MIN.)
5 - QUANTITY, DESCRIPTIVE NOMENCLATURE, CALIBER AND WEAPON DESIGNATION (1/2 IN.)
6 - ZONE MARKING, IF APPLICABLE (1/2 IN.)
7 - BURSTING CHARGE, IF APPLICABLE (1/2 IN.)
8 - NATO SYMBOL OF INTERCHANGEABILITY
9 - ACTUAL GROSS WEIGHT (1/2 IN.)
10 - CUBICAL DISPLACEMENT (1/2 IN.)
11 - DATE (MONTH AND YEAR) LOADED (1/2 IN.)
12 - LOT NUMBER-UNDERLINE WITH SOLID LINE 1/8 IN-WIDE MIN (1 IN.)
13 - DOD IDENTIFICATION CODE (1 IN., 1/2 IN. MIN.)
14 - LOT NUMBER (1 IN.)
NOTE 2
NOSE END
NOTE 3
NOTE 1
TOP
BACKGROUND COLOR (AS APPLICABLE) MAY BE PLACED ON EITHER END CLEAT
AMMUNITION W/EXPLOSIVE BURSTERS
NOTE 4
NOTE 5
NOTE 6
NOTE 14
NOTE 8
NOTE 9
NOTE 10
WT
CU
LB
LOADED
NOTE 7
NOTE 11
SIDE
NOTE 12
NOTE 13
END
AR 100332

Figure 4-4. Typical marking diagram for wooden boxes.

e. Procedure for Rockets.

(1) Refer to table 4-1 for painting and marking data for rockets and rocket weapon systems. General colors will be the same as they were originally.

NOTE

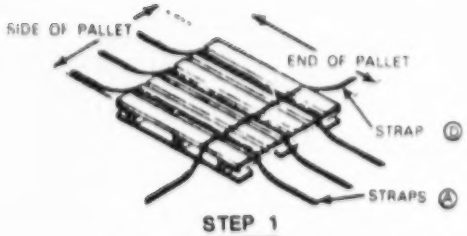
The words "W/LINER" will not always appear in warhead marking. Include "W/LINER" in marking only when it appeared originally on warheads.

(2) For specific markings, see ammunition data card or another item from the same lot.

(3) Refer to figures 4-5 through 4-10 for location and size of markings.

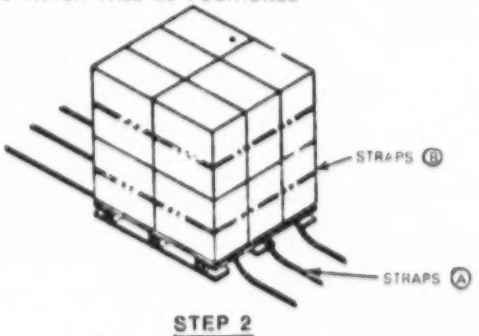
GENERAL NOTES

1. UNIT SHOWN HEREON IS PREPARED TO MEET THE FOLLOWING REQUIREMENTS
   - A. GROSS WEIGHT APPROX 2000 LBS, NOT TO EXCEED 2200 LBS
   - B. WEIGHT OF PALLET AND LOAD NOT TO EXCEED 52".
   - C. OVERHANG AVOIDED WHERE POSSIBLE, BUT SHOULD NOT EXCEED APPROX 1" IN ANY DIRECTION. ONE INCH, TWO INCH, OR FOUR INCH BATTENS MAY BE USED AS REQUIRED.
   - D. BOXES SECURED TO THE PALLET BY STEEL STRAPPING 1-1/4" X .035, TYPE I, CLASS A OR B, FED SPEC QQ-S-781A.
   - E. STRAPPING SECURED BY ONE 1-1/4" SEAL SECURED WITH A DOUBLE CRIMP, FED SPEC QQ-S-766.
2. A MINIMUM OF 2 STAPLES WILL BE USED TO FASTEN EACH STRAP TO ITS BATTEN. STAPLES WILL NOT BE USED WITHOUT BATTENS. STAPLES AUTHORIZED ARE 1-3/8" X 3/4".
3. ADDITIONAL BANDING OR GIRTH BANDING MAY BE USED ON THE PALLET LOAD, AT THE DISCRETION OF THE SHIPPER.
4. FILLERS, CONSTRUCTED OF TWO INCH LUMBER, MAY BE USED TO COMPLETE PARTIAL LAYERS ON PALLET. FILLERS SHOULD BE PLACED ON INTERIOR OF TOP LAYER, WHENEVER PRACTICAL.
5. ALL WP AND PWP FILLED AMMUNITION WILL BE PLACED NOSE END UP EXCEPT ROCKETS AND RIFLE GRENADES WHICH WILL BE POSITIONED NOSE END DOWN.



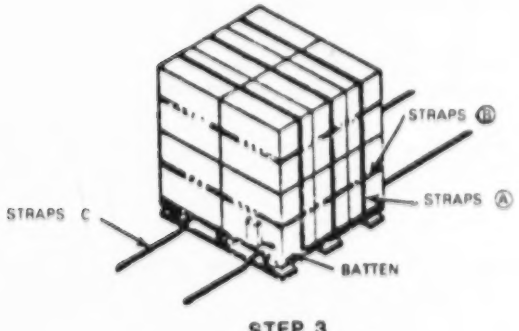
STEP 1

POSITION STRAPS (A) ON PALLET IF REQUIRED BY DETAILED UNIT LOAD. POSITION STRAPS (B) ON PALLET IF REQUIRED.



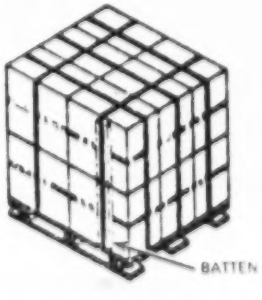
STEP 2

LOAD BOXES ON PALLET. STRAPS (B) TO CENTER ON BOXES. IF STRAPS (B) ARE DESIGNATED ON DETAILED UNIT LOAD THEY WILL BE CENTERED ON THE BOX HEIGHT EXCEPT WHEN SHOWN OTHERWISE.



STEP 3

TENSON AND SEAL STRAPS (C) IF REQUIRED BY DETAILED UNIT LOAD (SEE UNIT NO. 2 FOR TYPICAL EXAMPLE). TENSION AND SEAL STRAPS (A) AND/OR (B) (SEE STEP 2). POSITION STRAPS (C), LOCATE AS INDICATED IN DETAILED UNIT LOAD. POSITION BATTENS AS REQUIRED.



STEP 4

TENSION AND SEAL STRAPS (C). STAPLE STRAPS TO BATTENS AS REQUIRED BY UNIT DETAIL.

ARD 85-1953

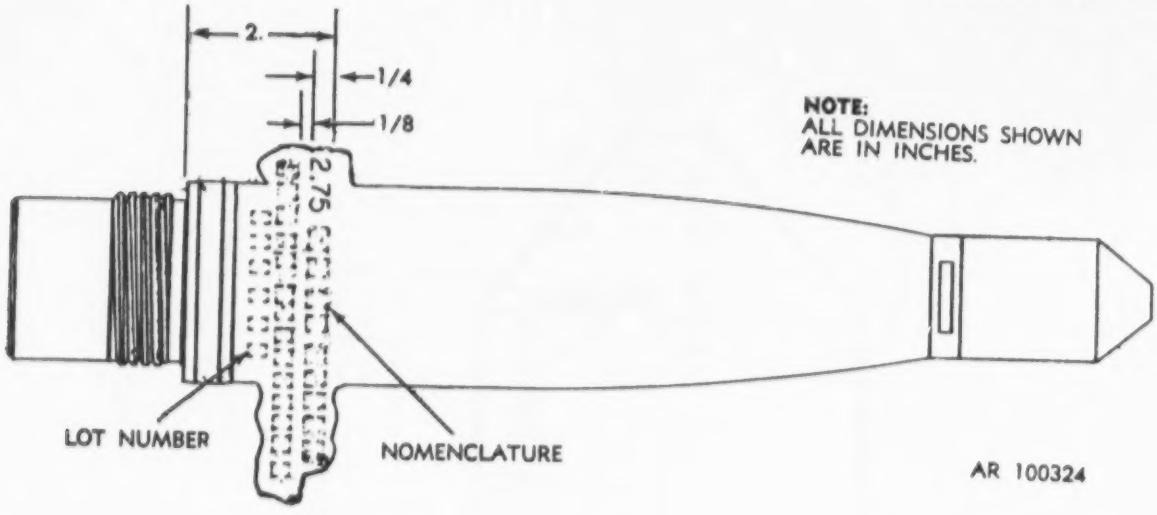


Figure 4-5. Typical marking diagram for 2.75-inch rocket warhead.

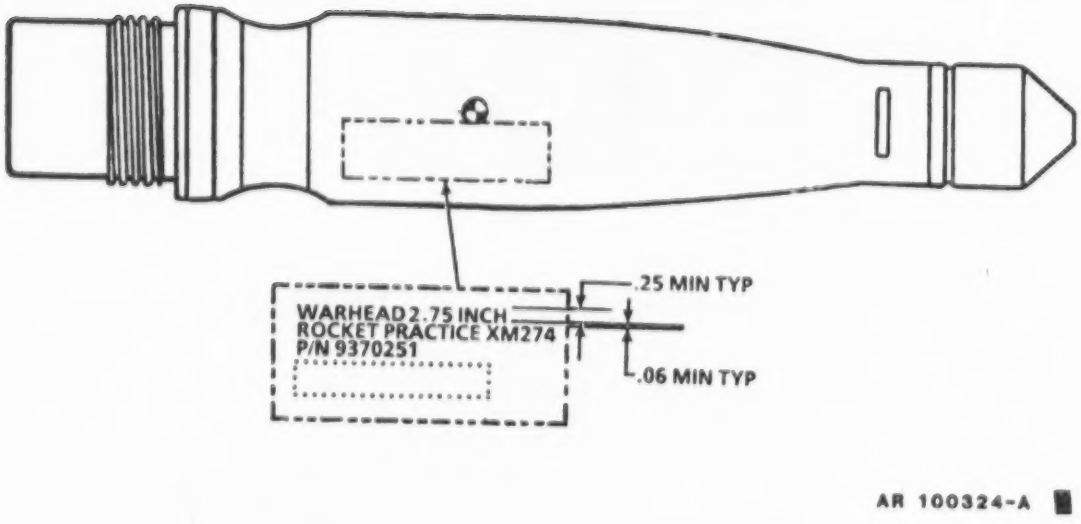


Figure 4-5a. Marking diagram for 2.75-inch M274 rocket warhead.

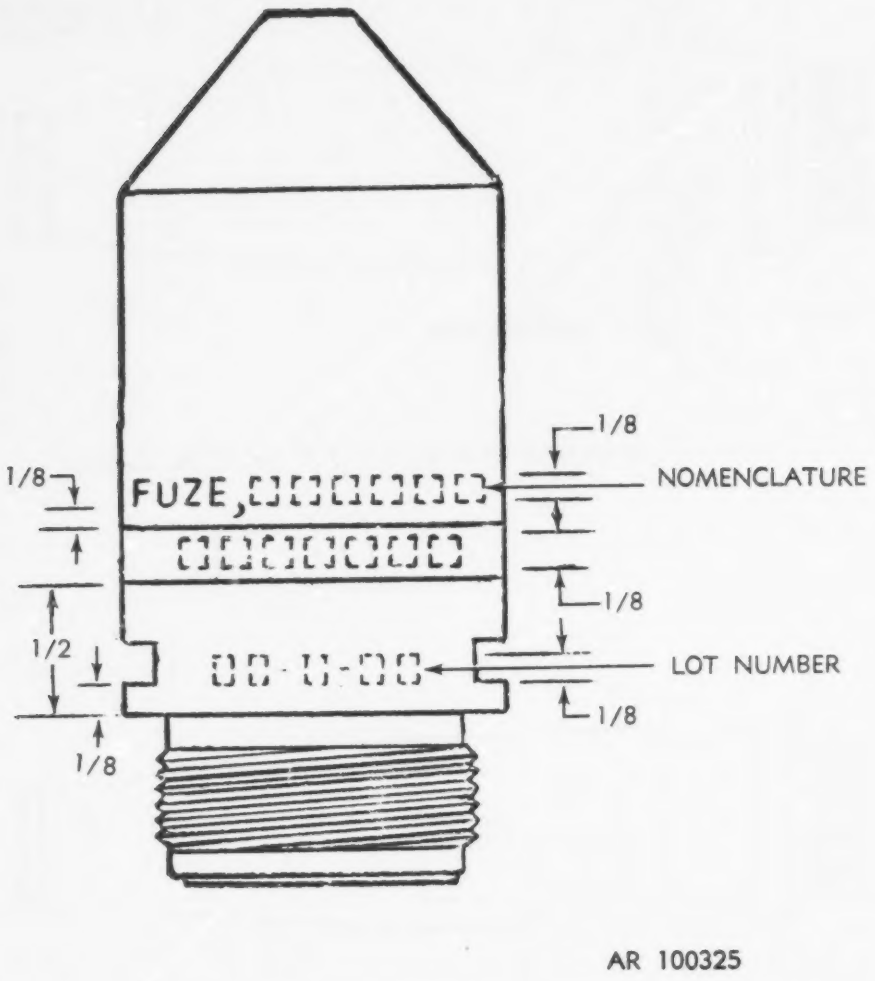


Figure 4-6. Typical marking diagram for 2.75-inch rocket fuzes.

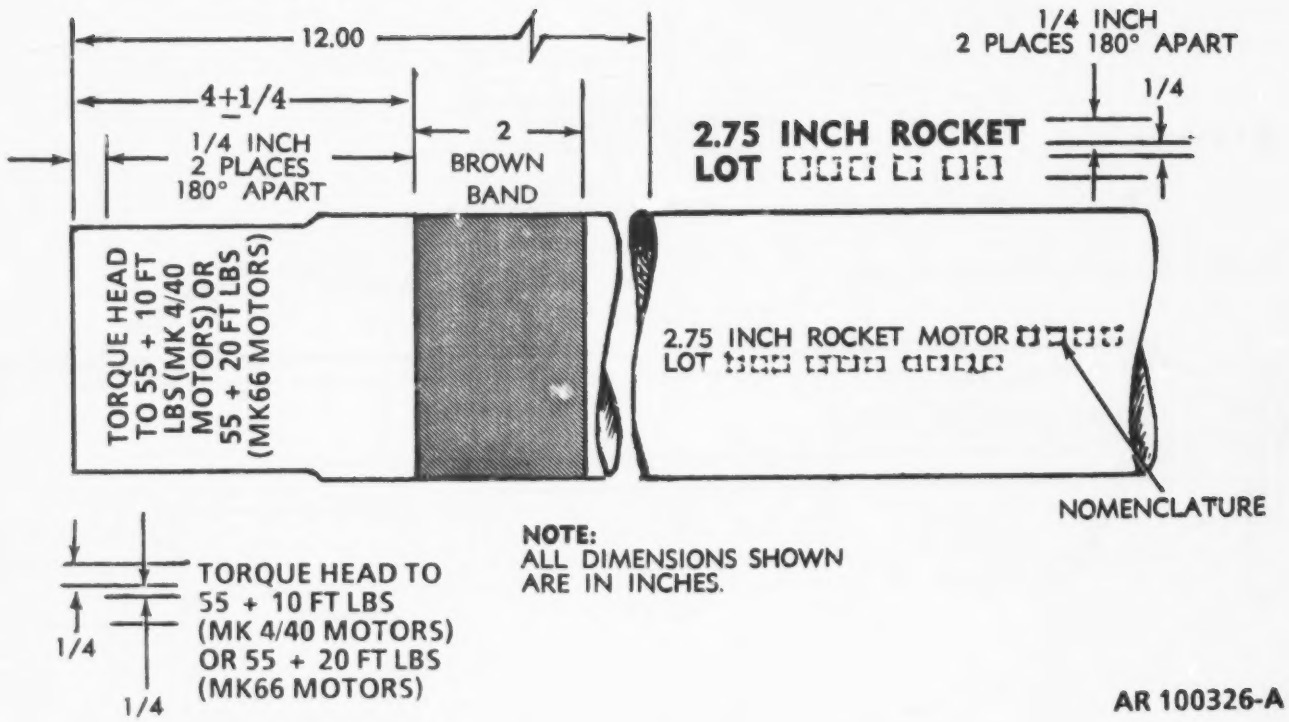
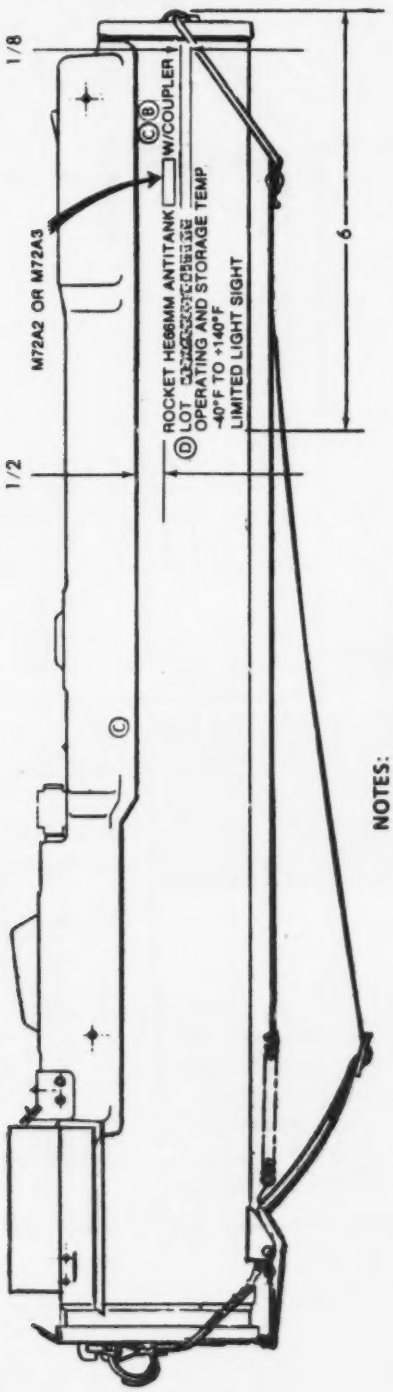


Figure 4-7. Typical marking diagram for 2.75-inch rocket motors.



NOTES:

- ALL DIMENSIONS SHOWN ARE IN INCHES.
- "W/COUPLER" AND AN "R" LOT SUFFIX ARE NOT REQUIRED ON M72A3 MODELS.

Figure 4-8. Typical marking diagram for 66-mm LAW system.

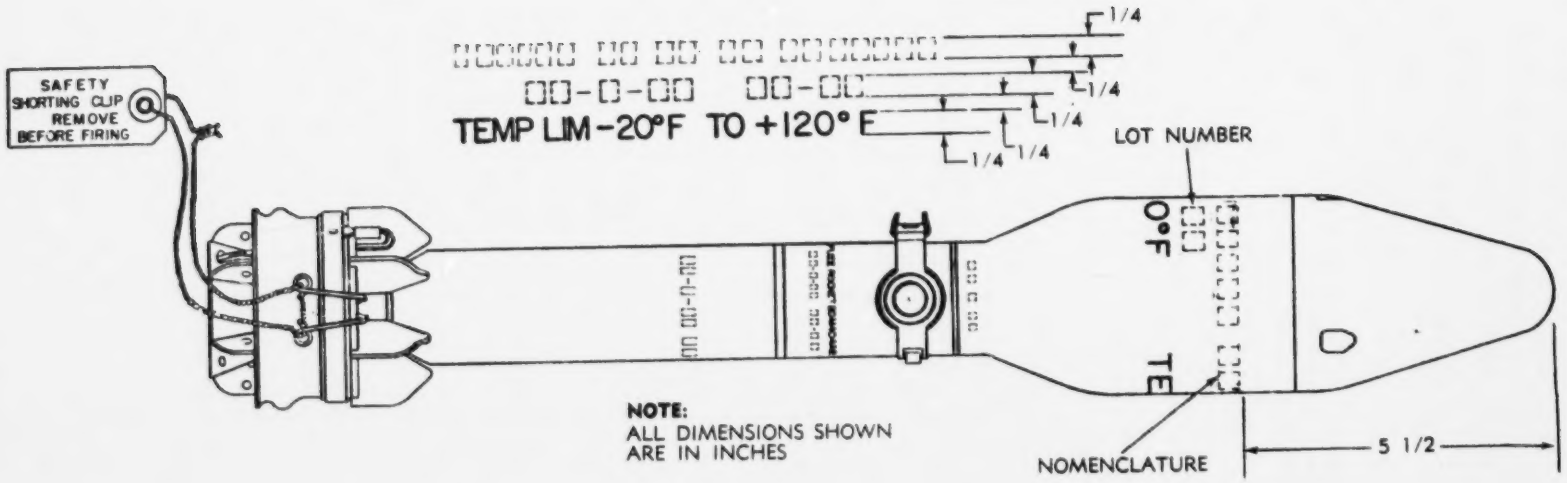


Figure 4-9. Typical marking diagram for 3.5-inch rockets.

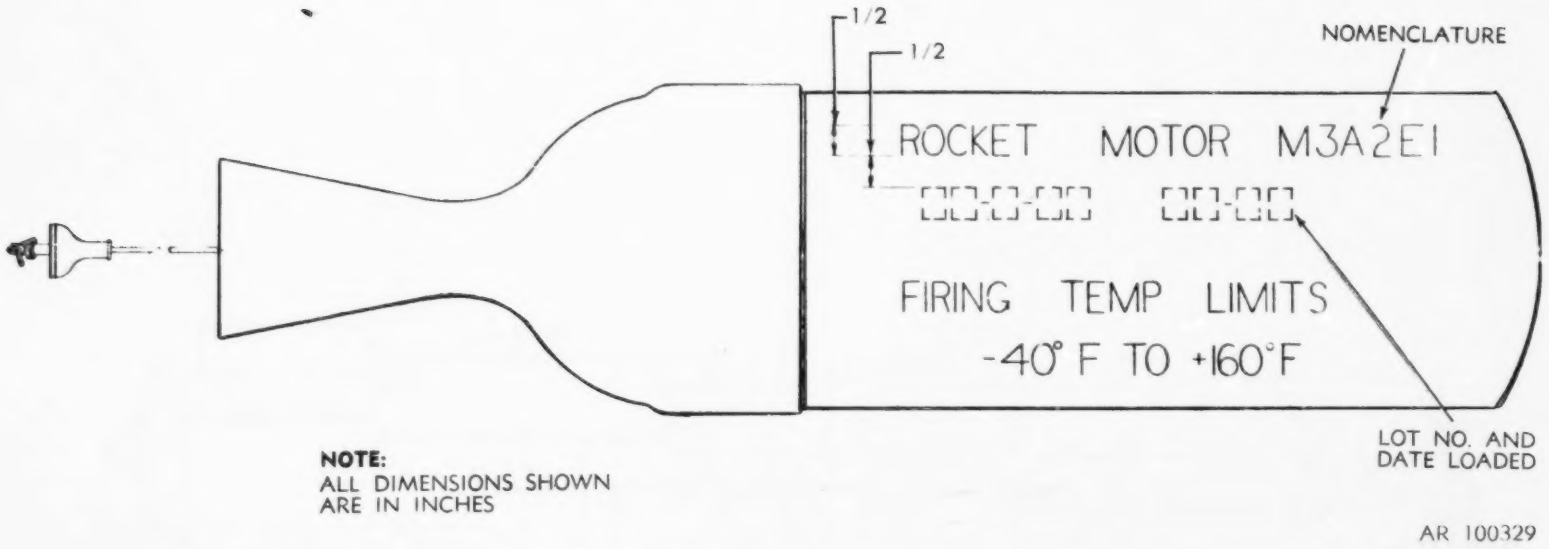


Figure 4-10. Typical marking diagram for rocket motor M3A2E1(JATO).

(4) Apply markings by either rubber-type method or stencil method outlined in f. below.

f. Methods.

(1) Rubber-type method.

(a) Set type in holder giving required information.

(b) Apply a small amount of ink to ink plate.

(c) Move roller back and forth on plate to distribute ink evenly.

(d) Move roller lightly across face of rubber type to apply light film of ink to type.

(e) Carefully roll item to be marked across rubber type.

(2) Stencil method.

(a) Make a stencil giving required information.

(b) Apply a dab of ink to ink plate.

(c) Rub brush in ink to apply ink to bristles.

(d) Position stencil cutout over area to be marked.

(e) While holding stencil firmly against item (using masking tape, if required), rub bristles of brush over stencil cutout to apply marking to item.

NOTE

A spray gun or can with paint of proper color may be used as an alternate.

(f) Carefully remove stencil and/or masking tape.

(3) Markings. Check markings to assure they are correct, neat, and legible.

Table 4-1. Painting and Marking Data for Rockets and Rocket Weapon Systems

2.75-INCH ROCKET

Component	Model no.	Color of body	Color of markings	Reference	Markings
Warheads	M151	Olive drab	Yellow	Fig. 4-5	2.75-INCH; HE, COMP B, WARHEAD M151 W/LINER (W/ OR W/O FUZE) LOT NO. _____ DATE LOADED _____
	M156	Light green	Light red, with one yellow band	Fig. 4-5	2.75-INCH: WP, WARHEAD M156 W/LINER W/FUZE (or W/O FUZE) LOT NO. _____ DATE LOADED _____
	WDU-4A/A	Olive drab	White, w/band of white diamonds 3/4 in. from thread shoulder	Fig. 4-5	WARHEAD, 2.75-INCH ROCKET, FLECHETTE, WDU-4A/A LOT NO. _____ MFG DATE _____
	M229	Olive drab	Yellow	Fig. 4-5	2.75-INCH: HE, COMP B, WARHEAD M229 W/LINER W/FUZE (or W/O FUZE) LOT NO. _____ DATE LOADED _____
	WTU-1/B	Blue	White	Fig. 4-5	2.75-INCH: PRACTICE, WARHEAD M230 LOT NO _____ DATE LOADED _____
	M247	Black	Yellow	Fig. 4-5	WARHEAD, 2.75-INCH ROCKET, HE, DUAL PURPOSE XM247 LOT NO. _____ DATE OF MFG _____
	M257	Olive drab	White	Fig. 4-5	WARHEAD, 2.75-INCH ILLUMINATION: M257 LOT NO. _____ DATE OF MFG _____
	M259	Light green	Light red, with one yellow band	Fig. 4-5	WARHEAD, 2.75-INCH ROCKET, SMOKE: SCREENING, WP, M259 LOT NO. _____ DATE LOADED _____

Table 4-1. Painting and Marking Data for Rockets and Rocket Weapon Systems-continued

2.75-INCH ROCKET -- Continued

Component	Model no.	Color of body	Color of markings	Reference	Markings
	M261	Olive drab	Yellow w/yellow band	Fig. 4-5	WARHEAD, 2.75-INCH ROCKET, MPSM, M261, COMP B. (W/FUZE M439) LOT NO. ABC79H018-124B(Example)* DATE LOADED_____
	M267	Blue	White w/brown band	Fig. 4-5	WARHEAD, 2.75-INCH ROCKET, PRACTICE, M267 (W/FUZE M439) LOT NO. ABC80H018-124B (Example)* DATE LOADED_____
	M274	Blue	White w/Brown band	Fig 4-5a	WARHEAD, 2.75-INCH ROCKET, PRACTICE, M274 P/N 9370251 LOT NO._____ DATE LOADED_____
Fuzes	M423	Green	Yellow	Fig. 4-6	FUZE, ROCKET, M423, PART 8883745 LOADED_____ LOT NO._____
	M429	Green	Black	Fig.4-6	FUZE, ROCKET, PROXIMITY, M429 LOT NO._____ LOADED_____
	M433	Olive drab	Black	Fig. 4-6	FUZE, ROCKET: RS: M433 LOADED_____ LOT NO._____
	M439			Fig. 4-6	FUZE, ROCKET: LOADED _____ LOT NO._____
Motor	MK40 Mod 3	White	Black	Fig. 4-7	2.75-INCH: ROCKET MOTOR MK40 MOD 3. FIRING TEMPERATURE LIMITS -50°F to +140°F LOT NO._____
	MK66 Mod 1 & 2	White	Black	Fig. 4-7	2.75-INCH ROCKET MOTOR MK66 MOD 1. LOADED ASSEMBLY FIRING TEMPERATURE LIMITS -50°F to +150°F. DO NOT USE IF DROPPED 2 FEET OR MORE. LOT NO._____

*Ammunition Lot Numbering MIL-STD-1168A (28 Feb 75)

Table 4-1. Painting and Marking Data for Rockets and Rocket Weapon Systems--Continued

Component	Model no.	Color of body	Color of markings	Reference	Markings
			66-MM LAW		
Assembled complete round	M72 Series	Olive drab	Yellow	Fig. 4-8	ROCKET, HE, 66-MM ANTITANK M72A2 LOT _____ OPERATING AND STORAGE TEMP −40°F to +40°F LIMITED LIGHT SIGHT
			3.5-INCH ROCKET		
Assembled complete round	M282A	Olive drab	Yellow	Fig. 4-9	ROCKET, HEAT, 3.5-INCH, M282A LOT NO. _____ DATE LOADED _____ TEMP LIM −20°F to +120°F
	M29A2	Blue	White	Fig. 4-9	ROCKET, PRACTICE, 3-5-INCH, M29A2 LOT NO. _____ DATE LOADED _____ TEMP LIM −20°F to +120°F
	M30	Gray	Yellow, with ½-in. wide yellow band approximately 5 inches from nose end	Fig. 4-9	ROCKET, SMOKE, 3-5-INCH, WP, M30 LOT NO. _____ DATE LOADED _____ TEMP LIM −20°F to +120°F
			ROCKET MOTOR (JATO)		
Assembled complete round	M3A2E1	Olive drab	Brown	Fig. 4-10	ROCKET MOTOR, M3A2E1 LOT NO. _____ DATE LOADED _____ FIRING TEMP LIMITS −40°F to +160°F

APPENDIX A

REFERENCES

A-1. Administrative Publications

a. Publication Indexes. The following publication index should be consulted frequently for latest changes or revisions of references given in this appendix and for new publications relating to the material covered in this manual.

Blank Forms ..... DA Pam 310-1

b. Army Regulations.

Reporting of Transportation Discrepancies in Shipments ..... AR 55-38

Malfunctions Involving Ammunition and Explosives ..... AR 75-1

Ionizing Radiation Protection (Licensing) Control, Transportation, Disposal, and Radiation Safety ..... AR 385-11

Accident Reporting and Records ..... AR 385-40

Policies and Procedures for Firing Ammunition for Training, Target Practice, and Combat ..... AR 385-63

Reporting of Item and Packaging Discrepancies ... AR 735-11-2

Storage and Supply Activity Operations ..... AR 740-1

A-2. Blank Forms

Discrepancy in Shipment Report (Short Title "DISREP") ..... SF 361

Report of Discrepancy (ROD) SF 364

US Army Accident Investigation Report ..... DA Form 285

Munitions Surveillance Report ..... DA Form 984

Recommended Changes to Publications and Blank Forms ..... DA Form 2028

Ammunition Condition Report ..... DA Form 2415

A-3. Doctrinal, Training, and Organizational Publications

60-MM High Explosive Antitank Rocket M72A1, M72A2, and M72 ..... FM 23-33

A-4. Equipment Manuals

a. Technical Manuals.

Operator's Aviation Unit and Intermediate Maintenance Manual Including Repair Parts and Special Tools List for 2.75-Inch Rocket Launcher ..... TM 9-1055-460-13&P

Aviation Unit Maintenance Manual: Armament Subsystem, Helicopter, 7.62MM Machine Gun, 2.75-Inch Rocket Launcher: M21 (NSN 1090-00-923-5971) Used on UH-1B and UH-1C Helicopters ..... TM 9-1090-202-12

Operator, Aviation Unit and Intermediate Maintenance Manual with Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts and Special Tools) for Rocket Management Subsystems Inventory-Deployment, XM138 ..... TM 9-1090-207-13&P

Ammunition, General ..... TM 9-1300-200

Ammunition and Explosive Standards ..... TM 9-1300-206

Ammunition Maintenance ... TM 9-1300-250

Organizational Maintenance Manual: Rocket Launcher M190 with Subcaliber 35MM Practice Rocket: M73 ..... TM 9-1340-203-20

Operator's Manual for 66MM Light Antitank Weapon (LAW) System M72A1 and M72A2 with Coupler and Practice Rocket Launcher M190 with M73 Practice Rocket ..... TM 9-1340-214-10

Organizational Maintenance Manual (Including Repair Parts and Special Tools Lists) 2.75-Inch Low Spin, Folding Fin Aircraft Rockets; 66MM Light Antitank Weapon

Systems; 3.5-Inch Rockets and M3A2E1 Rocket Motor (JATO) ..... TM 9-1340-222-20
The Army Maintenance Management System (TAMMS) ..... TM 38-750
Destruction of Improved Conventional Ammunition (ICM) to Prevent Enemy Use ..... TM 43-0002-33

b. Technical Bulletins.

Ammunition: National Stock Numbers and Department of Defense Code ..... TB 9-1300-256
Munitions: Suspended or Restricted ..... TB 9-1300-385-1
Munitions: Permanently Suspended or Restricted ... TB 9-1300-385-2

c. Supply Bulletins.

Ammunition Surveillance Procedures ..... SB 742-1
Ammunition Surveillance Procedures for Rocket, 2.75-Inch, complete Round; Motors, Mk40 Series; Warheads, M151, M229, MDU 4A/A, M156, M247, M257; and Fuzes, M423, M427, and M429 ..... SB 742-1340-92-010

A-5. Supply Catalogs

Ammunition and Explosives: Classes 1340-1398 ..... SC 1340/98-IL
Shop Equipment, Ammunition Renovation Field Maintenance, Less Power (NSN 4925-00-754-0710) (Line Item W59719) MAP only (4925-00-919-0067) ..... SC 4925-95-CL-A03
Tool Set, Ammunition: Field Maintenance, Ordnance Ammunition company (NSN 4940-00-322-6058) (Item W59582) and MAP only (4940-00-919-0113) ..... SC 4940-95-CL-A11

APPENDIX B
DIRECT SUPPORT AND GENERAL SUPPORT REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

B-1. Scope

This appendix lists repair parts and special tools required for the performance of direct support and general support maintenance of 2.75-inch, low spin, folding fin aircraft rockets (LSFFAR), 66-mm light antitank weapon system (LAW), 3.5-inch rockets and rocket motor M3A2E1 (JATO).

B-2. General

This appendix is divided into the following sections:

a. Repair Parts List—Section II. A list of repair parts authorized for the performance of maintenance at direct support and general support levels.

b. Special Tools List—Section III. A list of special tools, test and support equipment authorized for the performance of maintenance at direct support and general support levels.

c. National Stock Number and Part Number Index—Section IV. A list, in ascending numerical sequence, of all National stock numbers appearing in the listings, followed by a list in alphameric sequence of all part numbers appearing in the listings. National stock number and part numbers are cross-referenced to each item number.

B-3. Explanation of Columns

The following provided an explanation of columns in sections II and III.

a. Item Number. Item number indicates the number used to reference the item on the listings. It consists of the following.

(1) *Repair parts list.* Item number is comprised of the group number (see maintenance allocation chart, TM 9-1340-222-20) followed by an assigned number according to alphameric sequence within the group.

(2) *Special tools list.* Item number is an assigned number given to each special tool. This number corresponds, if applicable, to the number used in column (4) of the maintenance allocation chart.

b. Source, Maintenance, and Recoverability Codes (SMR).

(1) Source code. Source code (first and second positions) indicates the source for the listed item. Source codes are:

Code	*Explanation*
PA	Item procured and stocked for anticipated or known usage.
XB	Item is not procured or stocked. If not available through salvage, requisition.

(2) *Maintenance code.* Maintenance code consists of two parts—USE code (third position) and REPAIR code (fourth position). USE code indicates the lowest maintenance level authorized to remove, replace, and use the listed item. REPAIR code indicates whether the item is to be repaired, and identifies the lowest maintenance level authorized to repair the listed item. Maintenance codes are:

Code	*Explanation*
	Use
F	Support item is removed, replaced, and used at the direct support level.
H	Support item is removed, replaced, and used at the general support level.
O	Support item is removed, replaced, and used at the organizational level.
	Repair
D	The lowest maintenance level capable of complete repair of the support item is the depot level.
F	The lowest maintenance level capable of complete repair of the support item is the direct support level.
O	The lowest maintenance level capable of complete repair of the support item is the organizational level.
Z	Nonreparable. No repair is authorized.

(3) *Recoverability code.* Recoverability code (fifth position) indicates the disposition action on an unserviceable item. Recoverability codes are:

Code	*Explanation*
F	Reparable item. When uneconomically reparable, condemn and dispose of at direct support level.
L	Reparable item. Repair, condemnation, and disposal not authorized below depot/specialized repair activity level.
O	Reparable item. Where uneconomically reparable, condemn and dispose of at organizational level.
Z	Nonreparable item. When unserviceable, condemn and dispose of at the level indicated in position 3 (USE code).

c. National Stock Number. This column indicates the National stock number assigned to the item and will be used for requisitioning purposes.

d. Part Number. This column indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

e. Federal Supply Code for Manufacturers (FSCM). The column indicates a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency that controls the design characteristics of the item.

f. Description. This column indicates the Federal item name and any additional description of the item required.

g. Unit of Measure (U/M). A two-character alphabetic abbreviation indicating the unit upon which the allowances are based; e.g., ft, ea, pr, etc.

h. Quantity Incorporated in Unit. This column indicates the quantity of the item used with or on the equipment.

B-4. How to Locate Repair Parts

a. Where National stock number or reference number is unknown:

(1) *First.* Using the maintenance allocation chart, TM 9-1300-251-20, section II, determine the functional or subfunctional group applicable to the repair part; i.e., fixed ammunition, cartridge (complete round), etc. This is necessary since item numbers are divided according to the same group numbers.

(2) *Second.* A number according to alphameric sequence has been assigned to each repair part within the same functional or subfunctional group. The part is listed opposite the item number shown.

b. When national stock number or part number is known:

(1) *First.* Using the index of National stock numbers or reference numbers, find the pertinent National stock number or reference number. This index is in ascending NSN sequence followed by a list of reference numbers in ascending alphameric sequence, cross-referenced to the item number.

(2) *Second.* After finding the item number, locate the item number in the repair parts list.

B-5. Federal Supply Code for Manufacturers

19203	Picatinny Arsenal
21450	US Army Weapons Command
45092	Osborne Manufacturing
49234	Protecto Seal Co.
81348	Federal Specifications
81349	Military Specifications

Section II. REPAIR PARTS LIST

(1) Item No.	(2) SMR code	(3) National Stock No.	(4) Part no.	(5) Federal supply code for manufacturing	(6) Description	(7) Unit of measure	(8) Qty inc in unit
					GROUP 0101 2.75-INCH ROCKETS—PACKING		
0101-1	XBOOO	8140-00-425-0749	9230114	19203	BOX, PACKING, AMMUNITION: for rockets, 2.75-inch: (w/warheads M151, M156, M230, WDU-4A/A, WTU-1/B)	ea	1
0101-2	XBOOO	8140-00-104-7646	9230116	19203	BOX, PACKING, AMMUNITION: for rockets, 2.75-inch: (w/warhead M229)	ea	1
0101-3	XBOOO	8140-00-104-7671	9235841	19203	BOX, PACKING, AMMUNITION: for rockets, 2.75-inch: (2/warheads M151, M156 and M230)	ea	1
0101-4	XBOOO	8140-00-104-7648	9235840	19203	BOX, PACING, AMMUNITION: for rockets, 2.75-inch: (w/warhead M229)	ea	1
0101-5	XBOOO	8140-00-040-7722	8886810	19203	BOX, PACKING, AMMUNITION: for rockets, 2.75-inch: M151, M156, M230, WTU-1/B, M274	ea	1
0101-6	XBOOO	8140-00-040-7723	9224842	19203	BOX, PACKING, AMMUNITION: for warhead, 2.75-inch: M229	ea	1
0101-7	XBOOO	8140-00-040-7728	9242057	19203	BOX, PACKING, AMMUNITION: for warhead, 2.75-inch: WDU-4A/A (for CONUS only)	ea	1
0101-8	XBOOO	8140-00-350-7788	8883479	19203	BOX, PACKING, AMMUNITION: for rocket motor, 2.75-inch: MK40	ea	1
0101-9	XBOOO	8140-00-864-3194	8861213	19203	BOX, PACKING AMMUNITION: for rocket fuzes: M423, M429	ea	1
0101-10	XBOOO	8140-00-040-7732	8864492	19203	CHEST, AMMUNITION: for rocket fuzes: M423, M429	ea	1
0101-11	XBOOO	8140-00-425-0747	9230113	19203	CONTAINER: AMMUNITION: fiber, PA 30 for rocket 2.75-inch: (warheads M151, M156, M230, WTU-1/B, WDU-4A/A)		
0101-12	XBOOO	8140-00-040-7735	9230115	19203	CONTAINER, AMMUNITION, FIBER: PA 29 for rocket, 2.75-inch, (warhead M229)	ea	1

Repair Parts List—Continued

(1) Item No.	(2) SMR code	(3) National Stock No.	(4) Part no.	(5) Federal supply code for manufacturing	(6) Description	(7) Unit of measure	(8) Qty inc in unit
					GROUP 0101—Continued		
					2.75-INCH ROCKETS—PACKING		
0101-13	XBOOO	8140-00-866-6399	8886811	19203	CONTAINER, AMMUNITION, FIBER: M523, for warhead 2.75-inch rocket M151, M156, M230, WTU-1/B	ea ea	1 1
0101-14	XBOOO	8104-00-040-7736	9224841	19203	CONTAINER, AMMUNITION, FIBER: PA 26, for warhead, 2.75-inch rocket, HE, M229	ea	1
0101-15	XBOOO	8140-00-859-8011	8883478	19203	CONTAINER, AMMUNITION, FIBER: M518, for rocket motor, 2.75-inch, MK 40		
0101-16					**DELETED**		
0101-17	XBOOO	8140-00-040-7737	9242056	19203	CARTON, PACKING, AMMUNITION FOR WARHEAD 2.75-INCH ROCKET: Flechette, WDU-4A/A	ea	1
0101-18	XBOOO	8140-00-040-7738	8882441	19203	SUPPORT, TOP: for fuze M423	ea	1
0101-19	XBOOO	8140-00-040-7740	8882442	19203	SUPPORT, BOTTOM: for fuze M423	ea	1
0101-20	XBOOO	8140-00-040-7754	9217200	19203	SUPPORT, TOP: for fuze M429	ea	1
0101-21	XBOOO	8140-00-040-7757	9217201	19203	SUPPORT, BOTTOM: for fuze M429	ea	1
0101-22	XBOOO	8140-00-040-7761	9242106	19203	SUPPORT, TOP: for fuze M432	ea	1
0101-23	XBOOO	8140-00-040-7765	9242108	19203	SUPPORT, BOTTOM: for fuze M432	ea	1
					GROUP 0102		
					3.5-INCH ROCKETS—PACKING		
0102-1	XBOOO	8140-00-828-7406	7549040	19203	BOX, PACKING, AMMUNITION FOR ROCKETS 3.5-INCH: M28A2, HEAT, M29A1, practice, M29A2, practice, M30 WP		
0102-2	XBOOO	8140-00-213-1685	7549038	19203	CONTAINER, AMMUNITION FIBER, M229: for rockets 3.5-inch: M28A2 HEAT, M29A1 practice, M30 WP	ea	1
					GROUP 0201		
					66-MM WEAPON SYSTEM—PACKING		
0201-1	XBOOO	8140-00-431-3443	9227926	19203	BOX, PACKING, AMMUNITION: for rockets, HE, 66-MM antitank M72A1 or M72A2, w/coupler	ea	1
0201-2	XBOOO	8140-00-040-7734	9227925-4	19203	BOX, PACKING, AMMUNITION: for rocket, HE, 66-MM antitank M72A1 or M72A2, w/coupler	ea	1
0201-3	XBOOO	8140-00-426-0993	9227925-6	19203	SADDLE, FRONT: for rocket, 66-MM, M72A1 or M72A2		
0201-4	XBOOO	8140-00-425-0770	9227925-7	19203	SADDLE, REAR: for rocket, 66-MM, M72A1 or M72A2	ea	1
					GROUP 0301		
					JATO—M3A2E1 ROCKET MOTOR		
0301-1	XBOOO	8140-00-113-6750	8835922	19203	BOX, PACKING, AMMUNITION FOR ROCKET MOTOR M3A2E1	ea	1

Section III. SPECIAL TOOLS LIST

(1) Item No.	(2) SMR code	(3) National Stock No.	(4) Part no.	(5) Federal supply code for manufacturing	(6) Description	(7) Unit of measure	(8) Qty inc in unit
1	PAFZZ	7520-00-049-7993	53M34750	21450	MARKING OUTFIT: rubber solid Gothic type ¼-, ½-, ¾-, 1-inch letters.	ea	1
2	PAOZZ	5120-00-319-5434	8864731	19203	SALLEE CLOSER	ea	1

Special Tools List—Continued

(1) Item No.	(2) SMR code	(3) National Stock No.	(4) Part no.	(5) Federal supply code for manufacturing	(6) Description	(7) Unit of measure	(8) Qty inc in unit
3	PAOZZ	3540-00-565-6242	MIL-S-43104	81349	STRAPPING AND SEALING KIT: (⅝-in. strapping).[2]	ea	1
4	PAOZZ	3540-00-565-6244	MIL-S-43014	81349	STRAPPING AND SEALING KIT: (1¼-in. strapping).[2]	ea	1
5	—	4240-00-022-2524	GGG-M-125	81348	RESPIRATOR, AIR FILTERING: replaceable, 1 or 2 cartridges, type IV, class 4.[1]	ea	1
6	—	7240-00-282-8411	RR-C-114	81348	CAN, FLAMMABLE WASTE: 5-, 6-gal. cap, foot operated cover, type I.[2]	ea	1
7	—	4940-00-633-9670	237 B	49234	CAN, PLUNGER, FLAMMABLE LIQUID: ¾-gal. cap, 2-in. -dia. screen.[2]	ea	1
8	—	7920-00-900-3577	Gordon 15SS or equal	17987	BRUSH: (Fuzewel) ¾ in. x 1-⅛ in. 1	ea	1
9	—	8020-00-240-6361	H-B-118	81348	BRUSH, ARTISTS: flat chisel edge[1]	ea	1
10	—	8020-00-246-8504	H-B-118	81348	BRUSH, ARTISTS: round flat edge[1]	ea	1
11	—	8020-00-597-4768	H-B-351	81348	BRUSH, ARTISTS: ⅛ in. x 1 in.[1]	ea	1
12	—	8020-00-245-4522	H-B-391	81348	BRUSH, PAINT: flat, w/squre edge, 2½ in. w, ⅛-in.	ea	1
13	—	8020-00-245-4516	H-B-420	81348	BRUSH, PAINT: grade A, 4 in. x 4-⅛ in.[1]	ea	1
14	—	8020-00-597-5301	H-B-491	81348	BRUSH, PAINT: oval style, chisel edge, ⅞ in. x 2-⅛ in.[1]	ea	1
15	—	7520-00-248-9285	H-B-621	81348	BRUSH, STENCIL: fountain type, 1-⅛ in. diameter, type F.[1]	ea ea	1 1
16	—	7520-00-223-8000	H-B-621	81348	BRUSH, STENCIL: long handle style, type L, 0.813 dia of bristles.[1]	ea	1
17	—	8020-00-889-7919	MIL-B-21766	81349	BRUSH, VARNISH: 1½ in. x [illegible] in.[1]	ea	1
18	—	8020-00-205-6505	H-B-695	81348	BRUSH, VARNISH: fl, w/chisel edge, 1½-in. w, [illegible]-in. thk, 2¾-in. lg class 1, grade A.[1]	ea	1
19	—	8020-00-262-9084	608-1	45092	BRUSH, VARNISH: fl, w/square edge, ½-in. w ¼-in. thk, 1¼-in. lg.[1]	ea	1
20	—	7920-00-225-5135	H-B-178	81348	BRUSH WIRE SCRATCH: wood and copper beryllium alloy, curved handle, 14 in. x [illegible] in. block 6 in. x 1¼ in. wire brush.[1]	ea	1
21	—	7920-00-269-0933	H-B-178	81348	BRUSH, WIRE SCRATCH: wood and copper beryllium alloy, straight handle, 7 in. x 1 in. block, 6 in. x 1¼ in. wire brush.[1]	ea	1

FOOTNOTES

[1]Item is currently being processed for inclusion in SC 4940-95-CL-A11 for direct support and SC 4925-LL-A03 for general support maintenance.

[2]Item is listed in SC 4925-95-CL-A03 for general support maintenance. It is being processed for inclusion in SC 4940-95-CL-A11 for direct support maintenance.

Section IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX

National stock No.	Part No.	Mfr. Code	Item No.
3540-00-565-6242	MIL-S-43104	81349	3
3540-00-565-6244	MIL-S-43104	81349	4
4240-00-022-2524	GGG-M-125	81348	5
4940-00-633-9670	237B	49234	7
5120-00-319-5434	8864731	19203	2
7240-00-282-8411	RR-C-114	81348	6
7520-00-049-7993	53M34750	21450	1
7520-00-223-8000	H-B-621	81348	16
7520-00-248-9285	H-B-621	81348	15
7920-00-255-5135	H-B-178	81348	20
7920-00-269-0933	H-B-178	81348	21
7920-00-900-3577	Gordon 15SS or equal	—	8

National Stock Number and Part Number Index—Continued

National stock No.	Part No.	Mfr. Code	Item No.
8020-00-205-6505	H-B-695	81348	18
8020-00-240-6361	H-B-118	81348	9
8020-00-245-4516	H-B-420	81348	13
8020-00-245-4522	H-B-391	81348	12
8020-00-246-8504	H-B-118	81348	10
8020-00-262-9084	608-1	45092	19
8020-00-597-4768	H-B-351	81348	11
8020-00-597-5301	H-B-491	81348	14
8020-00-889-7919	MIL-B-21766	81349	17
8140-00-040-7723	8886810	19203	0101-5
8140-00-040-7722	9224842	19203	0101-06
8140-00-040-7728	9242057	19203	0101-7
8140-00-040-7732	8864492	19203	0101-10
8140-00-040-7734	9227925	19203	0201-2
8140-00-040-7735	9230115	19203	0101-12
8140-00-040-7736	9224841	19203	0101-14
8140-00-040-7737	9242056	19203	0101-17
8140-00-040-7738	8882441	19203	0101-18
8140-00-040-7740	8882442	19203	0101-19
8140-00-040-7756	9217200	19203	0101-20
8140-00-040-7757	9217201	19203	0101-21
8140-00-040-7761	9242106	19203	0101-22
8140-00-040-7765	9242108	19203	0101-23
8140-00-104-7646	9230116	19203	0101-2
8140-00-104-7648	9235840	19203	0101-4
8140-00-104-7671	9235841	19203	0101-3
8140-00-113-6750	8835922	19203	0301-1
8140-00-213-1685	7549038	19203	0102-2
8140-00-350-7788	8883479	19203	0101-8
8140-00-425-0747	9230113	19203	0101-11
8140-00-425-0749	9230114	19203	0101-1
8140-00-425-0770	9227925-7	19203	0201-4
8140-00-426-0993	9227925-6	19203	0201-3
8140-00-431-3443	9227926	19203	0201-1
8140-00-828-7406	769040	19203	0102-1
8140-00-859-8011	8883478	19203	0101-15
8140-00-864-3194	8861213	19203	0101-9
8140-00-866-6399	8886811	19203	0101-13

Part No.	National Stock No.	Mfr. Code	Item No.
Gordon 15SS or equal	7920-00-900-3577	—	8
53M34750	7520-00-049-7993	21450	1
237B	4940-00-633-9670	49234	7
608-1	8020-00-262-9084	45092	19
MIL-B-21766	8020-00-889-7919	81349	17
MIL-S-43104	3540-00-565-6242	81349	3
MIL-S-43104	3540-00-565-6244	81349	4
GGG-M-125	4240-00-022-2524	81348	5
H-B-118	8020-00-240-6361	81348	9
H-B-118	8020-00-246-8504	81348	10
H-B-178	7920-00-255-5135	81348	20
H-B-178	7920-00-269-0933	81348	21
H-B-351	8020-00-597-4768	81348	11
H-B-391	8020-00-245-4522	81348	12
H-B-420	8020-00-245-4516	81348	13
H-B-491	8020-00-597-5301	81348	14
H-B-621	7520-00-223-8000	81348	16
H-B-621	7520-00-248-9285	81348	15

Part No	National Stock No.	Mfr. Code	Item No.
H-B-695	8020-00-205-6505	81348	18
RR-C-114	7240-00-282-8411	81348	6
7549038	8140-00-213-1685	19203	0102-2
7549040	8140-00-828-7406	19203	0102-1
8835922	8140-00-113-6750	19203	0301-1
8861213	8140-00-864-3194	19203	0101-9
8864492	8140-00-040-7732	19203	0101-10
8864731	5120-00-319-5434	19203	3
8882441	8140-00-040-7738	19203	0101-18
8882442	8140-00-040-7740	19203	0101-19
8883478	8140-00-859-8011	19203	0101-15
8883479	8140-00-350-7788	19203	0101-8
8886810	8140-00-040-7722	19203	0101-5
8886811	8140-00-866-6399	19203	0101-13
9217200	8140-00-040-7756	19203	0101-20
9217201	8140-00-040-7757	19203	0101-21
9224841	8140-00-040-7736	19203	0101-14
9224842	8140-00-040-7723	19203	0101-6
9227925-4	8140-00-040-7734	19203	0201-2
9227925-6	8140-00-426-0993	19203	0201-3
9227925-7	8140-00-425-0770	19203	0201-4
9227926	8140-00-431-3443	19203	0201-1
9230113	8140-00-425-0747	19203	0101-11
9230114	8140-00-425-0749	19203	0101-1
9230115	8140-00-040-7735	19203	0101-12
9230116	8140-00-104-7646	19203	0101-2
9230840	8140-00-104-7648	19203	0101-4
9235841	8140-00-104-7671	19203	0101-3
9242056	8140-00-040-7737	19203	0101-17
9242057	8140-00-040-7728	19203	0101-7
9242106	8140-00-040-7761	19203	0101-22
9242108	8140-00-040-7765	19203	0101-23

APPENDIX C
EXPENDABLE SUPPLIES

Section I. INTRODUCTION

C-1. Scope

a. This appendix lists expendable items which are required for direct and general support maintenance.

b. Expendable supplies shall be requisitioned through normal supply channels to comply with maintenance requirements.

C-2. Explanation of Columns

a. National Stock No. Column 1 indicates the National stock number assigned to the item and shall be used for requisitioning purposes.

b. Description. Column 2 indicates the item name and brief description to identify the item.

c. Specification No. Column 3 indicates the specification which controls the design or characteristics of the item.

d. Unit of Issue. Column 4 indicates the unit of issue of each item.

Section II. EXPENDABLE SUPPLIES

(1) National Stock No.	(2) Description	(3) Specification no.	(4) Unit of issue
6810-00-184-4796	Acetone, Technical: 25 gal can	O-A-51	cn
6810-00-543-7415	Alcohol, Denatured: grade III	O-E-760	gl
8135-00-282-0565	Barrier Material, Waterproofed, Flexible: 200-yd roll, 36-in. wide, class 1	MIL-B-131E	ro
8520-00-782-3509	Hand Cleaner: type I, class 2, cream, nonantimicrobial, grade A	P-H-0031	cn
8030-00-664-7105	Coating Compound, Bituminous Solvent Type: type I (los solids)	MIL-C-450	gl
8030-00-290-5141	Coating Compound, Bituminous Solvent Type: type II (medium solids)	MIL-C-450, type 2	gl
6850-00-174-9672	Corrosion Removing Compound: wipe-off type, type II, bottle	MIL-C-10578	gl
7930-00-249-8036	Detergent, General Purpose:	P-D-220	co
	Enamels:		
8010-00-910-8154	Black, No. 37038	TT-E-516	pt
8010-00-848-9272	Olive Drab, No. 34087	TT-E-516	pt
8010-00-878-5761	White, No. 37875	TT-E-516	pt
8010-00-851-5525	Yellow, No. 33538	MIL-E-16663	pt
8010-00-297-2122	Black, No. 37038	TT-E-516	gl
8010-00-297-2119	Blue, Medium, No. 35109	TT-E-516	gl
8010-00-828-3193	Light, Green, No. 34558	TT-E-516	gl
8010-00-297-2116	Olive Drab, No. 34087	TT-E-516	gl
8010-00-297-2113	Olive Drab, No. 34087	TT-E-516	cn
8010-00-848-9272	Olive Drab, No. 34087	TT-E-516	pt
8010-00-844-0870	Orange, (Vivid) No. 32246	TT-E-515	pt
8010-00-297-0563	Orange, (Vivid) No. 35524-13	TT-E-527	gl
8010-00-297-2114	Red, No. 31136	TT-E-516	gl
8010-00-297-2111	White, No. 37875	TT-E-516	gl
8010-00-878-5761	White, No. 37875	TT-E-516	pt
8010-00-297-2112	Yellow, No. 33538	TT-E-516	gl
5315-00-597-9766	Fastener, Corrugated, Woodjoint: Saw edge ½ in. deep	FF-F-133	gl
8415-00-682-6786	Gloves, Disposable: plastic	no spec	pr
	Ink, Marking Stencil:		
7510-00-161-0811	Black	TT-I-1795	gl
7510-00-161-0815	White	TT-I-1795	gl
7510-00-161-0816	Yellow:	TT-I-1795	gl
	Lacquers:		
8010-00-063-8968	Brown, No. 30117	MIL-L-11195	gl
8010-00-067-5436	Colorless	TT-E-488	pt
8010-00-664-1914	Grey, No. 36231	TT-L-20	pt
8010-00-584-3148	Orange, No. 12197	TT-L-50	pt
8010-00-527-3196	Lacquer: brown, No. 30277 for obliterating stencil markings	TT-L-40	gl
8010-00-161-7392	Lacquer: lusterless, sand. No. 30277 for obliterating stencil markings	TT-L-40	gl

Section II. EXPENDABLE SUPPLIES—Continued

(1) National stock No.	(2) Description	(3) Spcification no.	(4) Unit of issue
8020-00-240-6361	Brush, Artist's, 1/8 in. w	FED-W-B-118	ea
8020-00-262-9098	Brush, Artist's	FED-W-B-118	ea
	Marker, Tube Type:		
7520-00-973-1059	Black	GG-M-00114	ea
7520-00-973-1062	Red	GG-M-00114	ea
7520-00-079-0288	Yellow	GG-M-00114	ea
5315-00-889-2743	Nail, box, general purpose: style 4, type II, 4d, 1½ in.	Ff-N-105	pg
5315-00-889-2744	Nail, box, general purpose: style 4, type II, 6d, 2 in.	FF-N-105	pg
5315-00-889-2745	Nail, box, general purpose: style 4, type II, 8d, 2½ in.	FF-N-105	lb
5350-00-271-7935	Paper, Abrasive, flint: gr ⅛, ½ in. x 6 in. open coat, class 1	PP-105	pg
8135-00-160-7757	Paper, Kraft: grade B, No. 2, 9-in. roll dia., 24-in. w, 40 lb	UU-P-268	ro
8010-00-515-2208	Primer, Coating, zinc yellow	TT-P-1757	gl
8010-00-514-1861	Primer, Coating: zinc chromate, yellow	TT-P-600	pt
7920-00-205-1711	Rag, Wiping: cotton, unbleached, mixture	DDD-R-30	be
5340-00-598-3442	Seal, Antipilferage ⅞ dia., ⅛-thk	no spec	hd
8135-00-239-5291	Seal, Strapping: for 5/8-in. steel strapping	QQ-S-781	hd
8135-00-239-5294	Seal, Strapping: for 1-$^{23}/_{32}$ in. steel strapping	QQ-S-781	hd
9310-00-240-4737	Stencilboard: oiled, type II, grade III, 18-½ in.	UU-S-625	pg
8135-00-281-4071	Strapping, steel, ¾ in.	QQ-S-781	cl
8135-00-283-0671	Strapping, steel, 1 ¼ in.	QQ-S-781	cl
7510-00-266-6711	Tape, Pressure Sensitive, Adhesive: (masking) opaque, ¾-in. w. 60-yd lg. type I	PPP-T-42	ro
7510-00-266-6712	Tape, Pressure Sensitive, Adhesive: (masking) opaque, 1-in. w, 3-in. id, 60-yd lg, type I	PPP-T-42	ro
7510-00-266-6710	Tape, Pressure Sensitive, Adhesive: (masking) opaque, 2-in. w, 60-yd lg, type I	PPP-T-42	ro
7510-00-551-9822	Tape, Pressure Sensitive, Adhesive: transparent cellophane ½-in. w, w/dispenser	L-T-90	ro
7510-00-266-6715	Tape, Pressure Sensitive, Adhesive: 2 in	PPP-T-60	ro
8010-00-242-2089	Thinner, Paint, Mineral Spirits: grade I	TT-T-291	ro
8010-00-160-5794	Thinner, Synthetic Resin Enamel:	TT-T-306	gl
9505-00-294-7373	Wire, Nonelectrical: round zinc coated, 0.0625-in. dia., medium temper	QQ-W-461	cl
5350-00-242-4405	Wool, Metallic: steel, 1 lb	FF-S-740	ro

By Order of the Secretary of the Army:

CREIGHTON W. ABRAMS
General, United States Army,
Chief of Staff.

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